

### **Safety Data Sheet**

Conforms to REGULATION (EU) No. 453/2010

Version: Revision B
Issue date: 20/06/2016

## **GROUP 4**

# **NPK/NP/NK (< 70% AN)**

# 1.0 Identification of the substance/mixture and of the company/undertaking 1.1 Product Identifier

Product/Trade name Ammonium nitrate based compounds or blended fertilizers, NPK/NP/NK containing <70%

ammonium nitrate). As indicated on packaging by PSDS Group 4 marking and nutrient inclusion.

Common chemical name

AN based NPK, compound/blended fertilizer, complex fertilizer, NP fertilizer, NK fertilizer

Synonyms N/A Mixture
Chemical formula N/A Mixture
EU index number (Annex 1) N/A Mixture

EC No N/A Mixture
CAS No. N/A Mixture
REACH Registration Number. N/A Mixture
National Product Registration N/A

Number,

where applicable

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

Use of the substance/mixture Fertilizer

Uses advised against All non-agricultural fertilizer use.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Importer/Supplier Manufacturer

Company name: Origin Fertilisers (UK) Limited.

Full address: 1-3 Freeman Court, Jarman Way, Royston, Hertfordshire, SG8 5HW.

Tel: 01763 255500

Email address of the person

responsible for SDS

Email address: andy.bell@originfertilisers.co.uk

**1.4 Emergency telephone number** Tel; 01763 255500

Out of hours; 07715 801875

### 2 Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance with Regulation 1272/2008 (CLP)

Non-hazardous.

Hazard Statement(s)

Not applicable
Not applicable

Classification in accordance with Directive 67/548 (DSD)

Risk phrase(s)

Not applicable

2.2 Label elements

Hazard pictogram(s) None.

Signal word

Not applicable

Hazard Statement(s)

None.

Precautionary Statements	P210 P220 P280 P370+P378 P305+P351+ P338 P337+P313	Keep away from heat, sparks, open flames & hot surfaces. — No smoking. Keep/Store away from combustible materials & chemicals. Wear eye protection. In case of fire: Use copious quantities of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.				
	P221 P264	Take any precautions to avoid mixing with combustibles/. Wash hands thoroughly after handling.				
Other hazards						
PBT/vPvB criteria	_	Annex XIII of Regulation (EC) No 1907/2006, no PBT and vPvB assessment has been ce ammonium nitrate is inorganic.				
Other hazards which do not resu	t in classification	in classification				
Physical and chemical hazards	However, the The fertilizer is On heating it r containing nit	basically harmless products when handled correctly. following points should be noted for fire, heating and detonation: s not itself combustible but it can support combustion, even in the absence of air. melts and further heating can cause decomposition, releasing toxic fumes rogen oxides, ammonia and sulphur and other gases depending on composition. It cance to detonation. Heating under strong confinement can lead to explosive				
Health hazards	repeated cont gastro-intestir	are basically harmless products when handled correctly. However, prolonged or act with skin may cause discomfort, ingestion of large quantities may give rise to hal disorders and inhalation of dust at high concentrations may cause irritation of upper respiratory tract with symptoms such as sore throat and coughing. There are given effects.				
Environmental hazards		of nitrate and phosphate may cause adverse environmental impact such as in confined surface waters or nitrate contamination. See Section 12.				

3	Composi	tion/in	formati	ion on i	ingred	ients
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Mixture						
Hazardous ingredients						
Chemical name	CAS no.	EC no.	Generic REACH Reg No.)	Classification Regulation (EC) No. 1272/2008	Classification Directive 67/548/EEC	% (w/w)
Ammonium nitrate	6484-52-2	229-347-8	01-2119490981- 27	Ox. Sol 3, H272	O; R8, Xi; R36	<70%
Other ingredients		•	•	•	•	
Calcium Carbonate and/or (*)	471-34-1	207-439-9				Variable
(*) Dolomite	16389-88-1	240-440-2				Variable
Di-ammonium phosphate	7783-28-0	231-987-8	01-2119490974- 22-0014			Variable
Potassium Chloride	7447-40-7	231-211-8				Variable
Ammonium Sulphate	7783-20-2	231-984-1	01-2119455044- 46			Variable
Limestone	1317-65-3	215-279-6				Variable
EC no. means EINECS or ELINCS number.			•	•		•

4.0	First aid measures	
4.1	Description of first aid measures	
		In some cases medical attention necessary (see below).
		Remove from source of exposure to dusts to fresh air.
		Obtain medical attention if ill effects occur.
	Ingestion	Do not induce vomiting unless directed to do so by medical personnel.
	5	Rinse mouth and then give water or milk to drink.
		Obtain medical attention if more than a small quantity has been swallowed.
		NOTE; never give an unconscious person anything to drink.
	Skin contact	Wash the affected area with water.
	Eye contact	Flush/irrigate eyes, including under the eyelids, with copious amounts of water for at least 15
		minutes.
		Remove contact lenses if present and easy to do so. Continue rinsing.
		Obtain medical attention if symptoms persist.
4.2	Most important symptoms and effec	ts, both acute and delayed
	Acute effects	None known.
	Delayed effects	None known.
4.3	Indication of any immediate medical	attention and special treatment needed
	Note to physician	Inhalation of fire and thermal decomposition gases, containing oxides of nitrogen, ammonia and
		sulphur and other toxic gases can cause irritation and corrosive effects on the respiratory system.
		Some lung effects may be delayed. Give oxygen, especially if there is blueness around the mouth.
5.0	Fire-fighting measures	
5.1	Extinguishing media	
	Suitable extinguishing media	If fertilizer is not directly involved in the fire
		Use the best means available to extinguish the fire
		If fertilizer is involved in the fire
		Use plenty of water.
	Unsuitable extinguishing media	Do not use chemical extinguishers or foams or attempt to smother the fire with steam or sand.
	Special hazards arising from the subs	
	Specific hazards	Potential explosion hazard under fire conditions when severely confined and/or contaminted
		with incompatible materials (e.g. organic materials, halogenated compounds - see Section 10).
		Do not allow molten fertilizers to run into drains.
	Hazardous thermal decomposition	Oxides of nitrogen, sulphur, ammonia and depending on composition HCl etc.
	and combustion products	
	Advice for firefighters	
	Special fire fighting procedures	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.
	Special protective equipment for	Use a self-contained breathing apparatus if fumes are being entered.
	fire-fighters	
	Accidental release measures	
	Personal precautions, protective	Avoid walking through spilled product and exposure to dust.
	equipment and emergency	
6.3	procedures  Environmental procedures	Take care to avoid the contamination of watercourses and drains and inform the appropriate
6.2	Environmental precautions	Take care to avoid the contamination of watercourses and drains and inform the appropriate
	Nathada and matarial for	authority in case of accidental contamination of watercourses.
6.3	Methods and material for	Any spillage of fertilizer should be cleaned up promptly, swept up and placed in a clean labelled
	containment and cleaning up	open container for safe disposal, avoiding dusty conditions.
		Do not mix with sawdust and other combustible or organic substances.
		Dilute any contaminated or fine grained fertilizer with inert materials such as limestone/dolomite, mineral phosphate, gypsum, sand or dissolve in water.
		minicral phosphate, gypsam, sama or dissolve in water.

	Reference to other sections		r emergency cont for waste disposal		ection 8 for per	sonal protectiv	e equipment
7.0	Handling and storage						
	Handling and storage Precautions for safe handling	Avoid excessive	generation of dus	·+			
,·-	recounting	Avoid contamin materials. Avoid unnecess When handling e.g. gloves.	ary exposure to the the product over label	ble (e.g. diesel oil e atmosphere to l long periods use a	prevent moistu	re pick-up.	
	Conditions for a for a toronto						
7.2	Conditions for safe storage, including any incompatibilities	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 Section10. 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 sof 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 temperat The product should not be stored in direct sunlight to avoid physical breakdown due to their cycling.  Packaging materials:					round the stacks e under n temperature).
	Consists and works	·	c materials, steel a	nd aluminum are	suitable. Avoid	use of copper	and zinc.
7.3	Specific end use(s)	As a fertilizer.					
<b>2</b> 0	Exposure controls/personal protection	·-					
		)N					
8.1	Control parameters	on					
8.1		No specific EU o	official limit.				
8.1	Control parameters	No specific EU o	official limit. Dlace Exposure Lim	iits, (WEL's),			
8.1	Control parameters Regulated Exposure limit values	No specific EU o		its, (WEL's), Type.		Value.	Form.
8.1	Control parameters Regulated Exposure limit values Recommended occupational and	No specific EU o UK EH40 Workp Components.	olace Exposure Lim	Type.	Average. 4m		pirable Respirable Dust Inhalable
8.1	Control parameters Regulated Exposure limit values Recommended occupational and consumer exposure limit values (following from the performed CSA):	No specific EU of UK EH40 Works Components. Limestone (CAS)  Exposure patter Oral No Dermal 21. Inhalation 37.6	rn Derived No Effe Workers t applicable 3 mg/kg bw/day 5 mg/m3 DNEL is considered	Type. , (Time Weighted  ct Level (DNEL) General pop 12.8 mg/kg b 12.8 mg/kg bv 11.1 mg/m3	ulation w/day v/day	g/m3 Res 4mg/m3 10mg/m3 10mg/m3	pirable Respirable Dust Inhalable Inhalable Dust
8.1	Control parameters Regulated Exposure limit values Recommended occupational and consumer exposure limit values (following from the performed CSA):	No specific EU of UK EH40 Works Components. Limestone (CAS)  Exposure patter Oral No Dermal 21. Inhalation 37.6	rn Derived No Effe Workers t applicable 3 mg/kg bw/day 5 mg/m3 DNEL is considered	Type. , (Time Weighted  ct Level (DNEL) General pop 12.8 mg/kg b 12.8 mg/kg bv 11.1 mg/m3	ulation w/day v/day re that effects	g/m3 Res 4mg/m3 10mg/m3 10mg/m3	pirable Respirable Dust Inhalable Inhalable Dust
8.1	Control parameters Regulated Exposure limit values Recommended occupational and consumer exposure limit values (following from the performed CSA): For Ammonium nitrate	No specific EU of UK EH40 Works Components. Limestone (CAS)  Exposure patter Oral No Dermal 21. Inhalation 37.6 The long-term Esubstance do no	nlace Exposure Lim 1317-65-3). TWA rn Derived No Effe Workers t applicable 3 mg/kg bw/day 6 mg/m3 DNEL is considered ot occur.	Type. , (Time Weighted  ct Level (DNEL)     General pop     12.8 mg/kg bv     12.1 mg/m3	ulation w/day v/day	ig/m3 Res 4mg/m3 10mg/m3 10mg/m3	pirable Respirable Dust Inhalable Inhalable Dust
8.1	Control parameters Regulated Exposure limit values Recommended occupational and consumer exposure limit values (following from the performed CSA): For Ammonium nitrate	No specific EU of UK EH40 Works Components. Limestone (CAS)  Exposure patter Oral No Dermal 21. Inhalation 37.6 The long-term I substance do no fresh water; mg/l	rn Derived No Effe Workers t applicable 3 mg/kg bw/day 5 mg/m3 DNEL is considered ot occur.	Type. , (Time Weighted  ct Level (DNEL)     General pop     12.8 mg/kg b     12.1 mg/m3 I sufficient to ensu	ulation w/day v/day re that effects  Sewage treatment	ng/m3 Res 4mg/m3 10mg/m3 10mg/m3 from acute exp Freshwater sediment	pirable Respirable Dust Inhalable Inhalable Dust
8.1	Control parameters Regulated Exposure limit values Recommended occupational and consumer exposure limit values (following from the performed CSA): For Ammonium nitrate	No specific EU of UK EH40 Works Components. Limestone (CAS)  Exposure patter Oral No Dermal 21. Inhalation 37.6 The long-term I substance do no fresh water; mg/I  0.45	rn Derived No Effe Workers t applicable 3 mg/kg bw/day 6 mg/m3 DNEL is considered bt occur. marine water; mg/l	Type. , (Time Weighted  ct Level (DNEL)     General pop     12.8 mg/kg b     12.1 mg/m3 I sufficient to ensu	ulation w/day v/day re that effects  Sewage treatment plant; mg/l	g/m3 Res 4mg/m3 10mg/m3 10mg/m3 from acute exp Freshwater sediment mg/kg/dw	pirable Respirable Dust Inhalable Inhalable Dust oosure to the Soil mg/kg/dw
8.1	Control parameters Regulated Exposure limit values Recommended occupational and consumer exposure limit values (following from the performed CSA): For Ammonium nitrate  PNEC  Ammonium nitrate	No specific EU of UK EH40 Works Components. Limestone (CAS)  Exposure patter Oral No Dermal 21. Inhalation 37.6 The long-term I substance do no fresh water; mg/l  0.45  1.7	n Derived No Effe Workers t applicable 3 mg/kg bw/day 5 mg/m3 DNEL is considered ot occur. marine water; mg/l	Type. , (Time Weighted  ct Level (DNEL)     General pop     12.8 mg/kg b     12.8 mg/m3 I sufficient to ensu  Intermittent     use/release;     mg/l  4.5	ulation w/day v/day re that effects  Sewage treatment plant; mg/l	g/m3 Res 4mg/m3 10mg/m3 10mg/m3 from acute exp Freshwater sediment mg/kg/dw Not given	pirable Respirable Dust Inhalable Inhalable Dust oosure to the Soil mg/kg/dw Not given
8.1	Control parameters Regulated Exposure limit values Recommended occupational and consumer exposure limit values (following from the performed CSA): For Ammonium nitrate  PNEC  Ammonium nitrate  Di-ammonium phosphate	No specific EU of UK EH40 Works Components. Limestone (CAS)  Exposure patter Oral No Dermal 21. Inhalation 37.6 The long-term Is substance do not fresh water; mg/l  0.45 1.7 Not given	n Derived No Effe Workers t applicable 3 mg/kg bw/day 6 mg/m3 DNEL is considered ot occur. marine water; mg/l 0.045 0.17	Type. , (Time Weighted  ct Level (DNEL)     General pop     12.8 mg/kg bv     11.1 mg/m3 I sufficient to ensu  Intermittent     use/release;     mg/l     4.5     17	ulation w/day v/day re that effects  Sewage treatment plant; mg/l  18  10	g/m3 Res 4mg/m3 10mg/m3 10mg/m3 from acute exp Freshwater sediment mg/kg/dw Not given Not given	pirable Respirable Dust Inhalable Inhalable Dust  oosure to the  Soil mg/kg/dw  Not given  Not given

8.2	Exposure controls	
	Appropriate engineering measures	Avoid high dust concentration and provide ventilation where necessary. Risk of inhalation must be minimised as much as possible.
	'-	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.
	Individual protection	
	1	If dust concentration is high and/or ventilation is inadequate, use suitable dust mask or respirator with an appropriate filter; EN 136, EN 140, EN143, EN149, Filters P2
	Skin and body	Working clothes.
	Hands	Wear suitable gloves (e.g. plastic, rubber or leather) when handling the product over long periods.
		Use appropriate safety eye wear depending on the task being carried out. Wear safety glasses with side protection or safety goggles, (EN166).
	Environmental exposure controls	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.

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	Do not flush into surface water or sanitary sewer system.
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Physical and chemical properties	
Appearance	Solid, may contain; white, grey or brown, red, cream and straw and light grey coloured granule or prills unless deliberately coloured during manufacture.
Odour	Odourless.
Odour threshold	Not applicable
рН	Usually > 4.5 (water solution 100g/ltr).
Melting point/freezing point	160-170°C depending on moisture content (for ammonuim nitrate).
Initial boiling point and boiling range	Decomposes.
Flash point	Not applicable, as the fertilizer is a mixture of inorganic solids
Flammability (solid, gas)	Not flammable
Upper/lower flammability or explosive limits	Not applicable.
Explosive properties	The fertilizer has a high resistance to detonation.  This resistance is decreased by the presence of contaminants and/or high temperatures.  Heating under strong confinement (e.g. in tubes or drains) may lead to a violent reaction or explosion especially if there is contamination by some of the substances mentioned under Section 10.
Auto-ignition temperature	Ammonium nitrate based NPK/NP/NK fertilizer is not combustible.
Decomposition temperature	May start to decompose above approx. 170°C.
Minimum ignition energy	Not applicable
Oxidising properties	Not classified as an oxidizer.
Critical temperature	Not applicable
Relative density	Not applicable
Density	(1725 kg/m <sup>3</sup> for main ingredient ammonium nitrate as solid material)
Loose bulk density	950 - 1050kg/m3
Vapour pressure at 20°C	Not applicable
Vapour density	Not applicable
Partition coefficient (n-	Not applicable
octanol/water)	
Viscosity	Not applicable
Mean particle size	2-4mm
Water solubility	Pure ammonium nitrate:1920 g/l at 20 °C
	Hygroscopic - readily picks up moisture from the air.
Surface tension	Not surface active (based on molecular structure)

	Other information						
	-	Not applicable					
	-	Not available					
		Not applicable					
	Remarks	No further relevant information available.					
10.0	Stability and reactivity						
		Stable under recommended stor	rage and handling conditions (see section 7, handling and				
10.1	Reactivity	storage).					
10.2		itable under recommended storage and handling conditions (see section 7, handling and					
	Chemical stability	storage).					
10.3	Possibility of hazardous reactions	When heated can decompose.					
10.4	Conditions to avoid	Heating above 170°C (decompos	ses to gases).				
		Contamination by incompatible	materials.				
		Unnecessary exposure to the atr					
		Sources of heat or fire close to the	ne product.				
		Heating under confinement.					
		welding or not work on equipment washing thoroughly to remove a	ent or plant which may have contained fertilizer without first				
10.5	Incompatible materials		agents, acids, alkalis, sulphur, chlorates, chromates, nitrites,				
	meompatible materials		rs and substances containing metals such as copper, nickel,				
		cobalt, zinc and their alloys.	and substantials containing metals such as copper, money				
		,					
10.6	Hazardous decomposition products	For fire situation: see section 5.					
	<b>P</b>		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.					
	Toxicological information						
11.1	Information on toxicological effects						
	•	Not available					
	distribution						
	Acute toxicity	Ingredients					
	-	Ammonium nitrate	LD50: 2950 mg/kg bw (OECD 401)				
	Acute dermal toxicity		LD50: > 5000 mg/kg bw (OECD 402)				
	Acute inhalation toxicity		LC50: > 88.8 mg/l (no guideline followed)				
	-	Di-ammonium phosphate	LD50: > 2000 mg/kg, rat, (OECD 425)				
	•	Di-ammonium phosphate	LD50: > 5000 mg/kg, rat, (OECD 402)				
	-	Di-ammonium phosphate	LC50: > 5 mg/l, rat, 4hr duration of exposure, (OECD 403)				
	-	Potassium chloride	LD50: 3020 mg/kg, rat.				
	•	Ammonium sulphate	LD50: 2840 mg/kg, rat.				
	•	Ammonium sulphate	LD50: 4540 mg/kg, rat.				
	Acute oral toxicity	Ammonium sulphate	LD50: 640 mg/kg, mouse.				
	•	Ammonium sulphate	LDLO: 3500 mg/kg, domestic animals.				
	Acute dermal toxicity		LD50: >2000 mg/kg, rat.				
	Acute inhalation toxicity	Ammonium sulphate	>1000 mg/m3, (8 hours TWA), rat.				
	Local effects						
	Skin irritation	Product	No critical or specific hazard				
	Eye irritation	Product	Not classified as irritating; see section 16.				
	Sensitisation	• • • • • • • • • • • • • • • • • • • •	magnesium nitrate, nitric acid ammonium calcium salt, sodium				
		nitrate). Prolonged contact may	cause irritation and dryness from Limestone.				

Other For main ingredient ammonium nitrate

**Sub-acute toxicity** Inhalation 2-weeks NOAEL ≥ 185 mg/m3 (OECD 412),

Oral 28-day NOAEL ≥ 1500 mg/kg bw/day (OECD 422, with potassium nitrate), and; Oral 28-day NOAEL ≥ 250 mg/kg bw/day (OECD 422, with di-ammonium phosphate) Oral 52-week NOAEL = 256 mg/kg bw/day (OECD 453, with ammonium sulphate)

Mutagenicity Negative (OECD 471, 473, with nitric acid ammonium calcium salt)

Negative (OECD 476, with potassium nitrate)

**Reproductive toxicity** Oral 28-day NOAEL ≥ 1500 mg/kg bw/day (OECD 422, with potassium nitrate)

**Carcinogenicity** Not carcinogenic (OECD 453, with ammonium sulphate)

**Remarks** 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.

No new or increased hazards of Sub-acute toxicity, Mutanegicity, Reproductive toxicity and/or Carcinogenicity are introduced from the inclusion of one or more of each of the substances; Diammonium Phosphate, Potassium Chloride, Ammonium Sulphate and Limestone in the dry mixture/blend. Limestone dust if inhaled over a prolonged or extended period can, by respirable dust, lead to respiratory system damage and disease. Crystalline silica is present in limestone at around 2% by content, (Ref; HSE INDG 463), respirable crystalline silica has been associated with the lung disease silicosis.

2.1	Toxicity		
	Ammonium nitrate	Fish (short-term)	48-h LC50: 447 mg/l (no guideline followed)
		Fish (long-term)	No data
		Daphnia magna (short-term)	48-h EC50: 490 mg/l (no guideline followed, with potassium nitrate)
		Daphnia magna (long-term)	No data
		Algae	10-d EC50: > 1700 mg/l (seawater, no guideline followed, performed with potassium nitrate)
		Inhibition of microbial activity	3-h EC50: >1000 mg/l, NOEC: 180 mg/l (OECD 209, with sodium nitrate)
	Di-ammonium phosphate	Acute algae toxicity	EC50: > 100 mg/l, EC10/LC10 or NOEC = 100mg/l for freshwater algae, species; Selanastrum capricornutum, 72 hour period.
	DAP commercial grade.	Acute toxicity on fish.	LC50: 1700mg/l for fry at 21deg/C, species Cirrhinus mrigala. LC50 = 1875 mg/l on fingerlings at 21 deg/C, 96 hour period.
	Single superphosphate, (read across	Acute toxicity on aquatic	EC50/LC50: 1790 mg/l for freswater invertebrates at 20.7
	to Di-ammonium phosphate).	invertebrates.	deg/C, species Daphnia carinata, 72 hour period.
		PNEC for freshwater; 1.7 mg/l, PI 17mg/l.	NEC for matine water; 0.17 mg/l, PNEC for intermittent releases;
		Inhibition of microbial activity	3-h EC50/LC50: >100 mg/l, EC10/LC10 or NOEC: 100 mg/l
			(Activated sludge of a predominantly domestic sewage)
		PNEC for sewage treatment plan	t: 10mg/l
	Potassium Chloride	Toxicity to fish.	LC50: 880 mg/l, species Pimephales Promelas, (fathead minnow), 96 hour period, OE CD Test Guideline 203.
		Toxicity to daphnia and other	EC50: 440 - 880 mg/l, species Dapnia Magna, (water flea), 48
		aquatic invertebrates.	hour period, OECD Test Guideline 202.
		Toxicity to algae.	EC50: >100 mg/l, species Desmodesmus Subspicatus, (green algae), 72 hour period, OECD Test Guideline 201.
		Toxicity to bacteria.	EC50: >1000mg/l, activated sludge, 3 hour period, OECD Test Guideline 209.
		Toxicity to fish, (chronic toxicity)	No observed effect concentration: 500 mg/l, 7 day period, OECD Test Guideline 210.

	Ammonium Sulphate	Toxicity to fish.	LC50: 6.6 - 39.2 mg/l, species Oncorhynchus Mykiss, (rainbow trout), 96 hour period.
			LC50; >20 mg/l, species Pimephales Promelas, (fathead minnow), 96 hour period.
		Toxicity to daphnia and other	LC50; >20 mg/l, species Daphnia Magna, (water flea), 96 hour
		aquatic invertebrates.	period.
12.2	Persistence and degradability	Ingredient name	Ammonium Nitrate
		Standard test is not applicable as	]
	_		, will completely dissociate into ions.
	11,41.51,515	Ingredient name	Di-ammonium Phosphate (N & P)
	Riodegradation	Standard test is not applicable as	
	_		not occur, and is also not susceptible to photodegradation.
	Trydrory313	Trydrorysis of the substance does	
		Ingredient name	Potassium Chloride (K)
	Biodegradation	Not applicable	
	Hydrolysis	Not applicable.	
		Ingredient name	Ammonium Sulphate (S)
	Biodegradation	Standard test is not applicable as	the mixture is inorganic.
	Hydrolysis	Not applicable.	
		Ingredient name.	Limestone.
	Biodegradation	Limestone is non-volatile and ine	rt, it is resistant to degradation and will persist in the
		environment.	
		Not applicable.	
12.3	Bioaccumulative potential	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), Potassium Chloride (K) and Ammonium Sulphate (S), Di-ammonium Phosphate (N & P); Aquatic bio-accumulation - simple inorganic salts with high aqueous solubility will exist in a dissociated form in an aqueous solution. Such a substance has a low potential for bioaccumulation. Terrestrial - simple inorganic salts with high aqueous solubility will bioaccumulation; will exist in a dissociated form in an aqueous
			solution. Such a substance has a low potential for
12.4	Mobility in soil	Very soluble in water. The NO3- io	bioaccumulation.  ed on main ingredient properties) on is mobile. The NH4+ ion is adsorbed by soil. ; Phosphates whether citrate or water soluble, are translocated riods and are then immobilised.
		Potassium Chloride (K); Not appli	cable.
		Ammonium Sulphate (S); easily so	
			tion and will persist in the environment.
12.5	Results of PBT and vPvB assessment	According to Annex XIII of Regulation conducted since ammonium nitra	tion (EC) No 1907/2006, no PBT and vPvB assessment has been ate is inorganic.
			nmonium Phosphate (N & P), is not PBT and not VPvB.
		=	nic so no PBT and vPvB assessment is required.
		Ammonium Sulphate, (S), is not c Limestone - not applicable.	
12.6	Other adverse effects		e environmental impact such as eutrophication in confined

r								
12.0	Disposal considerations							
13.0	Container	T						
	Container	or incineration	Containers should be cleaned by appropriate method and then re-used or disposed by or incineration as appropriate, in accordance with local and national regulations. On not remove label until container is thoroughly cleaned.  Depending on degree and nature of contamination dispose of by use as fertilizer on farmaterial 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)					
	Methods of disposal	material for liqu Do not empty ir accordance with						
	Package waste disposal	If approved by I returned for red		· · · · · · · · · · · · · · · · · · ·		ntents. s non-hazardous material or		
	Note: see section 7 for safe handling	and storage						
	- · · · · · · · · · · · · · · · · · · ·							
14.0	Transport information							
		ADD/DID	ADNI/ADNID	INADO	1000/1070			
14 1	UN Number	ADR/RID	ADN/ADNR Not cla	IMDG	ICAO/IATA			
	UN Proper shipping name	Not applicable.	Not applicable.	Not applicable.	Not applicable.			
14.3	Transport hazard class(es)		Not cla	ssifed				
	Packing group		Not appl	icable.				
	Label		Not appl	icable.				
14.5	Environmental hazards		Not appl					
14.6	Special precautions for user		No	ne.		l		
	Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code		Not App	icable.				
15.0	Regulatory information							
	Safety, health and environmental regulation/legislation specific for the substance or mixture	EC 2003/2003, 9	96/82 EC; Seveso <i>E</i>	irective.				
	Other regulations	Decision No 134	No 552/2009. Not	European Parliam	ent & of the Co	ouncil and Commission gulations 1990, (NAMOS), (as		
15.2	Chemical safety assessment		vith REACH Article t Ammonium Nitra		=	nt has been carried out for the		
10.0	Oth on informs - ti							
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 a 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.					ation, disposal, and release and aterial designated and may not		
	Classification in accordance with Regulation 1272/2008, as listed in Annex VI:	None.						
	Classification in accordance with Regulation 1272/2008, by self- classification based on the performed CSA	Not classified. No eye irritation 405)	n (tested on mixtu	es with similar co	mpositions acc	cording to OECD 437 and OECD		

Risk phrases	R8 Contact with combustible material may cause fire.					
	R36 Irritating to eye.					
Symbols	O oxidizing					
	Xi irritant					
Abbreviations and acronyms	Oxidizing solids category 3 (Ox. Sol 3)					
	May intensify fire; oxidizer (H272)					
	Eye irritation Category 2 (Eye Irrit. 2)					
	Causes serious eye irritation (H319)					
	CLP - Classification, Labelling and Packaging Regulation, (Regulation EC No. 1272/2008).					
	CAS Number - Chemical Abstracts Number, substance registration number.					
	EC No European Commission substance identification number.					
	% w/w - Percentage weight for weight; percentage by weight of solute in total weight of solution.					
	PBT - Persistent, bioaccumulative, toxic.					
	vPvB - Very persistent, very bioaccumulative.  DNEL - Derived no effect level.  PNEL - Prescribed no effect level.  LC50 - Lethal concentration for 50% of subjects.  LD50 - Lethal dose for 50% of subjects.  OECD - Organisation for Economic Co-operation and Development.					
						LOAEL - Lowest observed adverse effect level.
						NOAEL - No observed adverse effect level.
	EC50 - Effective Concentration for 50% of subjects.					
	NOEC - No observed effect concentration.					
	LTEL - Long term exposure limit.					
	STEL - Short term exposure limit					
	TWA - Time weighted average.					
	mg/kg/bw/day - mg/kg of body weight per day.					
	mg/kg/dw - mg/kg of dry weight.					
Training advice	Operators should be provided with information, instruction, training and supervision relative to this Safety Data Sheet and any subsequent COSHH assessment produced by his/her employer.					
Date of previous SDS	08/07/2010					
Modifications in this version						
References	EFMA/Fertilizers Europe Guidance documents, TFI HPV data; NOTOX gap analysis					

#### 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 Origin Fertilisers for the consequences of its use or misuse in any particular circumstances.