



Safety Data Sheet

Conforms to REGULATION (EU) No. 453/2010

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

GROUP 3 AMMONIUM NITRATE BASED, NON-HAZ, STRAIGHT FERTILIZERS (MAY CONTAIN AMMONIUM SULPHATE, N <45%).

1.0 Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Product/Trade name	Ammonium nitrate based, non-hazardous straight fertilizers, (may contain ammonium sulphate). As indicated on packaging by SDS Group 3 marking and nutrient inclusion. 1. <70% Ammonium Nitrate and inert. 2. <80% Ammonium Nitrate with Limestone/Dolomite/Mineral Calcium Sulphate, (e.g. CAN). 3. <45% Ammonium Nitrate and Ammonium Sulphate, (N & S). 4. Ammonium Sulphate Nitrate, (ASN).
Common chemical name	N/A Mixture
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 Number, where applicable	N/A

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
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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
Classification in accordance with Directive 67/548 (DSD)	Not applicable
Risk phrase(s)	Not applicable

2.2 Label elements	
Hazard pictogram(s)	None.
Signal word	Not applicable
Hazard Statement(s)	None.
Precautionary Statements	<p>P210 Keep away from heat, sparks, open flames & hot surfaces. — No smoking.</p> <p>P220 Keep/Store away from combustible materials & chemicals.</p> <p>P280 Wear eye protection.</p> <p>P370+P378 In case of fire: Use copious quantities of water.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P337 +P313 If eye irritation persists: Get medical attention.</p> <p>P221 Take any precautions to avoid mixing with combustibles/.</p> <p>P264 Wash hands thoroughly after handling.</p>
2.3 Other hazards	
PBT/vPvB criteria	According to Annex XIII of Regulation (EC) No 1907/2006, no PBT and vPvB assessment has been conducted since ammonium nitrate is inorganic.
Other hazards which do not result in classification	
Physical and chemical hazards	<p>Fertilizers are basically harmless products when handled correctly.</p> <p>However, the following points should be noted for fire, heating and detonation:</p> <p>The fertilizer is not itself combustible but it can support combustion, even in the absence of air. On heating it melts and further heating can cause decomposition, releasing toxic fumes containing nitrogen oxides, ammonia and sulphur, (N & S mixtures), and other gases depending on composition. It has high resistance to detonation. Heating under strong confinement can lead to explosive behaviour.</p>
Health hazards	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 and upper respiratory tract with symptoms such as sore throat and coughing. There are no known long term effects.
Environmental hazards	Heavy spillage of nitrate and phosphate may cause adverse environmental impact such as eutrophication in confined surface waters or nitrate contamination. See Section 12.

3 Composition/information on ingredients						
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	Oxid. Solid 3, H272 Eye Irrit. 2, H319	O; R8 Xi; R36	<p><70% AN with inert material.</p> <p><80% AN with Limestone/ Dolomite/ Mineral Calcium Sulphate</p> <p><45% AN & AS, (N & S).</p>
Other ingredients						
Ammonium Sulphate	7783-20-2	231-984-1	01-2119455044 - 46			Variable
Limestone	1317-65-3	215-279-6				Variable
<i>EC no. means EINECS or ELINCS number.</i>						

4.0 First aid measures	
4.1 Description of first aid measures	
	<p>General In some cases medical attention necessary (see below).</p> <p>Inhalation Remove from source of exposure to dusts to fresh air. Obtain medical attention if ill effects occur.</p> <p>Ingestion Do not induce vomiting unless directed to do so by medical personnel. 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.</p> <p>Skin contact Wash the affected area with water.</p> <p>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.</p>
4.2 Most important symptoms and effects, 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, (N & S mixtures), 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.
5.2 Special hazards arising from the substance or mixture	
Specific hazards	Potential explosion hazard under fire conditions when severely confined and/or contaminated with incompatible materials (e.g. organic materials, halogenated compounds - see Section 10). Do not allow molten fertilizers to run into drains.
Hazardous thermal decomposition and combustion products	Oxides of nitrogen, ammonia, (sulphur; N & S mixtures), and depending on composition HCl etc.
5.3 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 fire-fighters	Use a self-contained breathing apparatus if fumes are being entered.
6.0 Accidental release measures	
6.1 Personal precautions, protective equipment and emergency procedures	Avoid walking through spilled product and exposure to dust.
6.2 Environmental precautions	Take care to avoid the contamination of watercourses and drains and inform the appropriate authority in case of accidental contamination of watercourses.
6.3 Methods and material for containment and cleaning up	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. 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.

6.4	Reference to other sections	See section 1 for emergency contact information, section 8 for personal protective equipment and section 13 for waste disposal.																																				
7.0 Handling and storage																																						
7.1	Precautions for safe handling	<p>Avoid excessive generation of dust.</p> <p>Avoid contamination by combustible (e.g. diesel oil, grease, etc.) and/or other incompatible materials.</p> <p>Avoid unnecessary exposure to the atmosphere to prevent moisture pick-up.</p> <p>When handling the product over long periods use appropriate personal protective equipment, e.g. gloves.</p> <p>Carefully clean all equipment prior to maintenance and repair.</p>																																				
7.2	Conditions for safe storage, including any incompatibilities	<p>Store in compliance with national and local regulations</p> <p>Locate away from the sources of heat or fire.</p> <p>Keep away from combustible materials and substances mentioned under Section 10.</p> <p>On farm, ensure that the fertilizer is not stored near hay, straw, grain, diesel oil, etc.</p> <p>When stored loose, take particular care to avoid mixing with other fertilizers.</p> <p>Ensure high standard of housekeeping in the storage area.</p> <p>Do not permit smoking and use of naked lights in the storage areas.</p> <p>Restrict stack size (according to local regulations) and keep at least 1m distance around the stacks of bagged products.</p> <p>Any building used for the storage should be dry and well ventilated.</p> <p>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).</p> <p>The product should not be stored in direct sunlight to avoid physical breakdown due to thermal cycling.</p> <p>Packaging materials: Plastic synthetic materials, steel and aluminum are suitable. Avoid use of copper and zinc.</p>																																				
7.3	Specific end use(s)	As a fertilizer.																																				
8.0 Exposure controls/personal protection																																						
8.1 Control parameters																																						
	<p>Regulated Exposure limit values</p> <p>Recommended occupational and consumer exposure limit values (following from the performed CSA):</p> <p>For Ammonium nitrate</p>	<p>No specific EU official limit.</p> <p>UK EH40 Workplace Exposure Limits, (WEL's),</p> <table border="1" data-bbox="502 1377 1533 1579"> <thead> <tr> <th>Components.</th> <th>Type.</th> <th>Value.</th> <th>Form.</th> </tr> </thead> <tbody> <tr> <td>Limestone (CAS 1317-65-3).</td> <td>TWA, (Time Weighted Average.</td> <td>4mg/m³</td> <td>Respirable</td> </tr> <tr> <td></td> <td></td> <td>4mg/m³</td> <td>Respirable</td> </tr> <tr> <td>Dust</td> <td></td> <td>10mg/m³</td> <td>Inhalable</td> </tr> <tr> <td></td> <td></td> <td>10mg/m³</td> <td>Inhalable</td> </tr> </tbody> </table> <p>Dust Exposure pattern Derived No Effect Level (DNEL)</p> <table border="1" data-bbox="502 1624 1533 1758"> <thead> <tr> <th></th> <th>Workers</th> <th>General population</th> </tr> </thead> <tbody> <tr> <td>Oral</td> <td>Not applicable</td> <td>12.8 mg/kg bw/day</td> </tr> <tr> <td>Dermal</td> <td>21.3 mg/kg bw/day</td> <td>12.8 mg/kg bw/day</td> </tr> <tr> <td>Inhalation</td> <td>37.6 mg/m³</td> <td>11.1 mg/m³</td> </tr> </tbody> </table> <p>The long-term DNEL is considered sufficient to ensure that effects from acute exposure to the</p>					Components.	Type.	Value.	Form.	Limestone (CAS 1317-65-3).	TWA, (Time Weighted Average.	4mg/m ³	Respirable			4mg/m ³	Respirable	Dust		10mg/m ³	Inhalable			10mg/m ³	Inhalable		Workers	General population	Oral	Not applicable	12.8 mg/kg bw/day	Dermal	21.3 mg/kg bw/day	12.8 mg/kg bw/day	Inhalation	37.6 mg/m ³	11.1 mg/m ³
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	PNEC	fresh water; mg/l	marine water; mg/l	Intermittent use/release; mg/l	Sewage treatment plant; mg/l	Freshwater sediment mg/kg/dw	Soil mg/kg/dw																															
	Ammonium nitrate	0.45	0.045	4.5	18	Not given	Not given																															
	Ammonium Sulphate	0.312	0.0312	0.53	16.18	3	62.6																															
	Limestone	Not given	Not given	Not given	Not given	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.
	Hygienic measures	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	
	Respiratory system	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.
	Eyes	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.

9.0 Physical and chemical properties

Appearance	White or cream granules or prills and translucent or brown granules and light grey granules, unless deliberately coloured during manufacture.
Odour	Odourless.
Odour threshold	Not applicable
pH	pH water solution (100 g/l at 20°C) > 4.5.
Melting point/freezing point	Not determined and depending on moisture content, though pure Ammonium Nitrate melts around 170°C.
Initial boiling point and boiling range	Not determined.
Flash point	Not applicable, as the fertilizer is a mixture of inorganic solids
Flammability (solid, gas)	Non 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	Not applicable.
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	Not determined.
Loose bulk density	Normally between 1000-1050 kg/m ³ .
Vapour pressure at 20°C	Not applicable
Vapour density	Not applicable
Partition coefficient (n-octanol/water)	Not applicable
Viscosity	Not applicable
Mean particle size	2-4mm
Water solubility	>100 g/l. Hygroscopic - readily picks up moisture from the air.
Surface tension	Not surface active (based on molecular structure)
Other information	
Miscibility	Not applicable
Fat solubility	Not available

	Gas group	Not applicable
	Remarks	No further relevant information available.
10.0 Stability and reactivity		
10.1	Reactivity	Stable under recommended storage and handling conditions (see section 7, handling and storage).
10.2	Chemical stability	Stable under recommended storage and handling conditions (see section 7, handling and storage).
10.3	Possibility of hazardous reactions	When heated can decompose.
10.4	Conditions to avoid	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.
10.5	Incompatible materials	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.
10.6	Hazardous decomposition products	For fire situation: see section 5. When strongly heated, it melts and decomposes releasing toxic fumes (e.g. NO _x , 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.

11.0 Toxicological information

11.1 Information on toxicological effects

	Toxicokinetics, metabolism and distribution	Not available		
	Acute toxicity	Ingredients		
		Acute oral toxicity	Ammonium nitrate	LD50: 2950 mg/kg bw (OECD 401)
		Acute dermal toxicity	Ammonium nitrate	LD50: > 5000 mg/kg bw (OECD 402)
		Acute inhalation toxicity	Ammonium nitrate	LC50: > 88.8 mg/l (no guideline followed)
		Acute oral toxicity	Ammonium sulphate	LD50: 2840 mg/kg, rat.
		Acute oral toxicity	Ammonium sulphate	LD50: 4540 mg/kg, rat.
		Acute oral toxicity	Ammonium sulphate	LD50: 640 mg/kg, mouse.
		Acute oral toxicity	Ammonium sulphate	LDLO: 3500 mg/kg, domestic animals.
		Acute dermal toxicity	Ammonium sulphate	LD50: >2000 mg/kg, rat.
		Acute inhalation toxicity	Ammonium sulphate	>1000 mg/m ³ , (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	Not sensitizing (OECD 429, with 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/m ³ (OECD 412) Oral 28-day NOAEL ≥ 1500 mg/kg bw/day (OECD 422, with potassium nitrate), and; Oral 52-week NOAEL = 256 mg/kg bw/day (OECD 453, with ammonium sulphate), (N & S mixtures).		
	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 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.

12.0 Ecological information

12.1 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)

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 aquatic invertebrates.	LC50; >20 mg/l, species Daphnia Magna, (water flea), 96 hour period.

12.2 Persistence and degradability

Biodegradation

Ingredient name Ammonium Nitrate

Standard test is not applicable as the mixture is inorganic.

Hydrolysis

No hydrolysable group is present, will completely dissociate into ions.

Biodegradation

Ingredient name Ammonium Sulphate

Standard test is not applicable as the mixture is inorganic.

Hydrolysis

Not applicable.

Biodegradation

Ingredient name. Limestone.

Limestone is non-volatile and inert, it is resistant to degradation and will persist in the environment.

Hydrolysis

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 ingredient properties of Ammonium Nitrate and Ammonium Sulphate.

12.4 Mobility in soil

Low potential for adsorption (based on main ingredient properties)
 Very soluble in water. The NO₃⁻ ion is mobile. The NH₄⁺ ion is adsorbed by soil.
 Ammonium Sulphate - easily soluble in cold water.
 Limestone is resistant to degradation and will persist in the environment.

12.5 Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No 1907/2006, no PBT and vPvB assessment has been conducted since ammonium nitrate is inorganic.
 Ammonium Sulphate - is not considered to be PBT or vPvB.
 Limestone - not applicable.

12.6 Other adverse effects

Heavy spillage may cause adverse environmental impact such as eutrophication in confined surface waters.

13.0 Disposal considerations					
	Container	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.			
	Methods of disposal	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)			
	Package waste disposal	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	UN Number	Not classified			
14.2	UN Proper shipping name	Not applicable.	Not applicable.	Not applicable.	Not applicable.
14.3	Transport hazard class(es)	Not classified.			
14.4	Packing group	Not applicable.			
	Label	Not applicable.			
14.5	Environmental hazards	Not applicable.			
14.6	Special precautions for user	None.			
14.7	Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not Applicable.			
15.0 Regulatory information					
15.1	Safety, health and environmental regulation/legislation specific for the substance or mixture	EC 2003/2003, 96/82 EC; <i>Seveso Directive</i> .			
	Other regulations	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. Notification and Marking of Sites Regulations 1990, (NAMOS), (as amended 2013).			
15.2	Chemical safety assessment	In accordance with REACH Article 14, a Chemical Safety Assessment has been carried out for the main ingredient Ammonium Nitrate 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.					
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 (tested on mixtures with similar compositions according to OECD 437 and OECD 405)			

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) 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.