

# Product Safety Data Sheet

Conforms to REGULATION (EU) No. 453/2010



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## AN and AN/AMS containing 45% to 70% Ammonium Nitrate

<b>1.0 Identification of the substance/mixture and of the company/undertaking</b>	
<b>1.1 Product Identifier</b>	
Product/Trade name	Glasson Fertilizers 30-00-00+20%SO <sub>3</sub> , 30-00-00+19%SO <sub>3</sub> , 29-00-00+20%SO <sub>3</sub> or any other Ammonium Nitrate or Ammonium Nitrate and Ammonium Sulphate blend containing 45% to 70% Ammonium Nitrate.
Common chemical name	AN based NS fertilizer, compound fertilizer, complex fertilizer.
Synonyms	Not applicable.
Chemical formula	Not applicable.
EU index number	Not applicable.
EC No	Not applicable.
CAS No.	Not applicable.
REACH Registration Number.	Not applicable.
National Product Registration Number, where applicable	Not applicable.
<b>1.2 Relevant identified uses of the substance or mixture and uses advised against</b>	
Use of the substance/mixture	Fertilizer
Uses advised against	The use of this substance should be limited to those specified in this SDS.
<b>1.3 Details of the supplier of the safety data sheet</b>	
Manufacturer/Importer/Supplier	<b>Glasson Fertilizers</b> West Quay, Glasson Dock Lancaster, LA2 0DB Tel: +44 (0) 1524 753600 <a href="mailto:fertilizers@glassongrain.co.uk">fertilizers@glassongrain.co.uk</a>
<b>1.4 Emergency telephone number</b>	+44 (0)1524 753600 (7:30am - 5:00pm)

<b>2 Hazards identification</b>	
<b>2.1 Classification of the substance or mixture</b>	
Classification in accordance with Regulation 1272/2008 (CLP)	Ox. Sol 3, H272
Hazard Statement(s)	H272 May intensify fire; oxidiser.
Classification in accordance with Directive 67/548 (DSD)	O; R8
Risk phrase(s)	R8 Contact with combustible material may cause fire.
<b>2.2 Label elements</b>	
Hazard pictogram(s)	
Signal word	Warning
Hazard Statement(s)	H272 May intensify fire; oxidiser.
Precautionary statement(s)	P210 Keep away from heat, sparks, open flames & hot surfaces. — No smoking. P220 Keep/Store away from combustible materials & chemicals. P370+P378 In case of fire: Use copious quantities of water.  P264 Wash hands thoroughly after handling.

<b>2.3 Other hazards</b>	Ensure adequate ventilation, especially in confined areas
<b>PBT/vPvB criteria</b>	According to Annex XIII of Regulation (EC) No 1907/2006, no PBT and vPvB assessment has been conducted since ammonium sulphate is inorganic.
<b>Other hazards which do not result in classification</b>	
<b>Physical and chemical hazards</b>	Fertilizers are basically harmless products when handled correctly. However, the following points should be noted for fire, heating and detonation: 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 other gases depending on composition. It has high resistance to detonation. Heating under strong confinement can lead to explosive behaviour.
<b>Health hazards</b>	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.
<b>Environmental hazards</b>	Heavy spillage of nitrate and phosphate may cause adverse environmental impact such as eutrophication in confined surface waters or nitrate contamination. See Section 12.

<b>3 Composition/information on ingredients</b>						
Mixture						
<b>Hazardous ingredients</b>						
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-xxxx	Ox. Sol 3, H272 Eye Irrit. 2, H319	O; R8, Xi; R36	> 45% - < 70%
<b>Other ingredients</b>						
Chemical name	CAS no.	EC no.	Generic REACH Reg No.)	Classification Regulation (EC) No. 1272/2008	Classification Directive 67/548/EEC	% (w/w)
Ammonium Sulphate	7783-20-2	231-984-1	01-2119455044-46-xxxx	-	-	Variable
Calcium Carbonate	471-34-1	207-439-9	Exempt	-	-	Variable
EC no. means EINECS or ELINCS number.						
<i>This safety data sheet is not a guarantee of product specification or NPK value(s). NPK content is specified on sales orders, customer invoices, or product specifications.</i>						

<b>4.0 First aid measures</b>	
<b>4.1 Description of first aid measures</b>	
	<p><b>General</b> In some cases medical attention necessary (see below).</p> <p><b>Inhalation</b> Remove from source of exposure to dusts. Obtain medical attention if ill effects occur.</p> <p><b>Ingestion</b> Do not induce vomiting. Rinse mouth and then give water or milk to drink. Obtain medical attention if more than a small quantity has been swallowed.</p> <p><b>Skin contact</b> Wash the affected area with water.</p> <p><b>Eye contact</b> Flush/irrigate eyes with copious amounts of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Obtain medical attention if symptoms persist.</p>
<b>4.2 Most important symptoms and effects, both acute and delayed</b>	
<b>Acute effects</b>	Eye irritation.
<b>Delayed effects</b>	None known.
<b>4.3 Indication of any immediate medical attention and special treatment needed</b>	
<b>Note to physician</b>	Inhalation of fire and thermal decomposition gases, containing oxides of nitrogen, ammonia and sulphur, 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.

<b>5.0 Fire-fighting measures</b>	
<b>5.1 Extinguishing media</b>	
<b>Suitable extinguishing media</b>	<b>If fertilizer is not directly involved in the fire</b> Use the best means available to extinguish the fire.. <b>If fertilizer is involved in the fire</b> Use plenty of water.
<b>Unsuitable extinguishing media</b>	Do not use chemical extinguishers or foams or attempt to smother the fire with steam or sand.
<b>5.2 Special hazards arising from the substance or mixture</b>	
<b>Specific hazards</b>	Where combustible material is the source of the fire, extinguish this source as a matter of priority. Do not allow molten fertilizers to run into drains.
<b>Hazardous thermal decomposition and combustion products</b>	Hazardous decomposition products formed under fire conditions; Sulphur oxides, Nitrogen oxides, (NOx), ammonia, amines.
<b>5.3 Advice for firefighters</b>	
<b>Special fire fighting procedures</b>	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.
<b>Special protective equipment for fire-fighters</b>	Use a self-contained breathing apparatus if fumes are being entered.

<b>6.0 Accidental release measures</b>	
<b>6.1 Personal precautions, protective equipment and emergency procedures</b>	Avoid walking through spilled product and exposure to dust.
<b>6.2 Environmental precautions</b>	Take care to avoid the contamination of watercourses and drains and inform the appropriate authority in case of accidental contamination of watercourses.
<b>6.3 Methods and material for containment and cleaning up</b>	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.
<b>6.4 Reference to other sections</b>	See section 1 for emergency contact information, section 8 for personal protective equipment and section 13 for waste disposal.

<b>7.0 Handling and storage</b>	
The information in this section contains generic advice and guidance. The list of identified uses given in section 1 should be considered for any use-specific information provided in the Exposure Scenario(s).	
<b>7.1 Precautions for safe handling</b>	Avoid excessive generation of dust. Avoid contamination by combustible (e.g. diesel oil, grease, etc.) and/or other incompatible materials. Avoid unnecessary exposure to the atmosphere to prevent moisture pick-up. When handling the product over long periods use appropriate personal protective equipment, e.g. gloves. Carefully clean all equipment prior to maintenance and repair.
<b>7.2 Conditions for safe storage, including any incompatibilities</b>	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 Section 10. 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 stacks of 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 temperature). The product should not be stored in direct sunlight to avoid physical breakdown due to thermal cycling.  Packaging materials: Plastic synthetic materials, steel and aluminum are suitable. Avoid use of copper and zinc.
<b>7.3 Specific end use(s)</b>	Fertiliser.

<b>8.0 Exposure controls/personal protection</b>	
The information in this section contains generic advice and guidance. The list of identified uses given in section 1 should be considered for any use-specific information provided in the Exposure Scenario(s).	
<b>8.1 Control parameters</b>	
<b>Regulated Exposure limit values</b>	No specific EU official limit.

	<b>Recommended occupational and consumer exposure limit values (following from the performed CSA):</b>	Exposure pattern Derived No Effect Level (DNEL)				
	<b>For ammonium nitrate</b>	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 <sup>3</sup>	11.1 mg/m <sup>3</sup>		
		The long-term DNEL is considered sufficient to ensure that effects from acute exposure to the substance do not occur.				
	<b>PNEC</b>	fresh water: 0.45 mg/l	marine water: 0.045 mg/l	Intermittent use/release: 4.5 mg/l	Sewage treatment plant: 18 mg/l	
	<b>For ammonium nitrate</b>					
	<b>PNEC</b>	fresh water: 0.312 mg/l	marine water: 0.0312 mg/l	Intermittent use/release: 0.53 mg/l	Sewage treatment plant: 16.18 mg/l	Freshwater sediment: 3 mg/kg/dw
	<b>For ammonium sulphate</b>					Soil: 62.6 mg/kg/dw
<b>8.2</b>	<b>Exposure controls</b>					
	<b>Appropriate engineering measures</b>	Avoid high dust concentration and provide ventilation where necessary.				
	<b>Hygienic measures</b>	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.				
	<b>Individual protection</b>					
	<b>Respiratory system</b>	If dust concentration is high and/or ventilation is inadequate, use suitable dust mask or respirator with an appropriate filter (e.g. EN 143, 149, filters P1).				
	<b>Skin and body</b>	Working clothes.				
	<b>Hands</b>	Wear suitable gloves (e.g. plastic, rubber or leather) when handling the product over long periods.				
	<b>Eyes</b>	Use appropriate safety eye wear depending on the task being carried out.				
	<b>Environmental exposure controls</b>	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.				

<b>9.0</b>	<b>Physical and chemical properties</b>				
	<b>Appearance</b>	White or cream granules or prills, or brown translucent coloured granules unless deliberately coloured during manufacture.			
	<b>Odour</b>	Odourless.			
	<b>Odour threshold</b>	Not applicable			
	<b>pH</b>	Usually > 4.5			
	<b>Melting point/freezing point</b>	160-170°C depending on moisture content, ammonium nitrate main component			
	<b>Initial boiling point and boiling range</b>	Decomposes.			
	<b>Flash point</b>	Not applicable.			
	<b>Flammability (solid, gas)</b>	Not flammable.			
	<b>Upper/lower flammability or explosive limits</b>	Not applicable.			
	<b>Explosive properties</b>	No information available.			
	<b>Auto-ignition temperature</b>	No information available.			
	<b>Decomposition temperature</b>	May start to decompose above approx. 170°C.			
	<b>Minimum ignition energy</b>	Not applicable			
	<b>Oxidising properties</b>	Not classified as an oxidizer.			
	<b>Critical temperature</b>	Not applicable			
	<b>Relative density</b>	Not determined.			
	<b>Density</b>	Not determined.			
	<b>Loose bulk density</b>	Normally between 1000-1050 kg/m <sup>3</sup> .			
	<b>Vapour pressure at 20°C</b>	Not applicable.			





<b>Vapour density</b>	Not applicable.
<b>Partition coefficient (n-octanol/water)</b>	Not applicable.
<b>Viscosity</b>	Not applicable
<b>Mean particle size</b>	2-4mm approx.
<b>Water solubility</b>	>100 g/l Hygroscopic - readily picks up moisture from the air.
<b>Surface tension</b>	No information available.
<b>Other information</b>	
<b>Miscibility</b>	Not applicable.
<b>Fat solubility</b>	Not available.
<b>Gas group</b>	Not applicable.
<b>Remarks</b>	Molecular weight 80 for main ingredient ammonium nitrate.

<b>10.0 Stability and reactivity</b>	
<b>10.1 Reactivity</b>	Stable under recommended storage and handling conditions (see section 7, handling and storage).
<b>10.2 Chemical stability</b>	Stable under recommended storage and handling conditions (see section 7, handling and storage).
<b>10.3 Possibility of hazardous reactions</b>	When heated can decompose.
<b>10.4 Conditions to avoid</b>	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.
<b>10.5 Incompatible materials</b>	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.
<b>10.6 Hazardous decomposition products</b>	For fire situation: see section 5. When strongly heated, it melts 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.

<b>11.0 Toxicological information</b>	
<b>11.1 Information on toxicological effects</b>	
<b>Toxicokinetics, metabolism and distribution</b>	Not available
<b>Acute toxicity</b>	Ingredients
<b>Acute oral toxicity</b>	Ammonium nitrate LD50: 2950 mg/kg bw (OECD 401)
<b>Acute dermal toxicity</b>	Ammonium nitrate LD50: > 5000 mg/kg bw (OECD 402)
<b>Acute inhalation toxicity</b>	Ammonium nitrate LC50: > 88.8 mg/l (no guideline followed)
<b>Acute oral toxicity</b>	Ammonium sulphate LD50: 2840 mg/kg, rat.
<b>Acute oral toxicity</b>	Ammonium sulphate LD50: 4540 mg/kg, rat.
<b>Acute oral toxicity</b>	Ammonium sulphate LD50: 640 mg/kg, mouse.
<b>Acute oral toxicity</b>	Ammonium sulphate LDLO: 3500 mg/kg, domestic animals.
<b>Acute dermal toxicity</b>	Ammonium sulphate LD50: >2000 mg/kg, rat.
<b>Acute inhalation toxicity</b>	Ammonium sulphate >1000 mg/m <sup>3</sup> , (8 hours TWA), rat.
<b>Local effects</b>	
<b>Skin irritation</b>	Product No critical or specific hazard
<b>Eye irritation</b>	Product Irritating
<b>Sensitisation</b>	Not sensitizing (OECD 429, with magnesium nitrate, nitric acid ammonium calcium salt, sodium nitrate)
<b>Other</b>	For main ingredient ammonium nitrate
<b>Sub-acute toxicity</b>	Oral 28-day NOAEL ≥ 1500 mg/kg bw/day (OECD 422, with potassium nitrate) Oral 52-week NOAEL = 256 mg/kg bw/day (OECD 453, with ammonium sulfate) Inhalation 2-weeks NOAEL ≥ 185 mg/m <sup>3</sup> (OECD 412)
<b>Mutagenicity</b>	Negative (OECD 471, 473, with nitric acid ammonium calcium salt) Negative (OECD 476, with potassium nitrate)
<b>Reproductive toxicity</b>	Oral 28-day NOAEL ≥ 1500 mg/kg bw/day (OECD 422, with potassium nitrate)
<b>Carcinogenicity</b>	Not carcinogenic (OECD 453, with ammonium sulfate)
<b>Remarks</b>	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.

<b>12.0</b>	<b>Ecological information</b>			
<b>12.1</b>	<b>Toxicity</b>			
		<b>Ammonium nitrate</b>	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)
		<b>Ammonium Sulphate</b>	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.
<b>12.2</b>	<b>Persistence and degradability</b>	Ingredient name	Ammonium Nitrate	
		<b>Biodegradation</b>	Standard test is not applicable as the mixture is inorganic.	
		<b>Hydrolysis</b>	No hydrolysable group is present, will completely dissociate into ions.	
			Ingredient name	Ammonium Sulphate
		<b>Biodegradation</b>	Standard test is not applicable as the mixture is inorganic.	
		<b>Hydrolysis</b>	Not applicable	
<b>12.3</b>	<b>Bioaccumulative potential</b>	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).	
<b>12.4</b>	<b>Mobility in soil</b>	Low potential for adsorption (based on mixture properties); Ammonium Nitrate - Very soluble in water. The NO <sub>3</sub> <sup>-</sup> ion is mobile. The NH <sub>4</sub> <sup>+</sup> ion is adsorbed by soil. Ammonium Sulphate (S); easily soluble in cold water.		
<b>12.5</b>	<b>Results of PBT and vPvB assessment</b>	According to Annex XIII of Regulation (EC) No 1907/2006; Ammonium Nitrate - no PBT and vPvB assessment has been conducted since ammonium nitrate is inorganic. Ammonium Sulphate, (S), is not considered to be PBT or vPvB.		
<b>12.6</b>	<b>Other adverse effects</b>	Heavy spillage may cause adverse environmental impact such as eutrophication in confined surface waters.		

13.0 Disposal considerations	
<b>Container</b>	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.
<b>Methods of disposal</b>	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 )
<b>Package waste disposal</b>	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	UN2067	UN2067	UN2067	UN2067	
14.2 UN Proper shipping name	Ammonium nitrate based fertilizer	Ammonium nitrate based fertilizer	Ammonium nitrate based fertilizer	Ammonium nitrate based fertilizer	
14.3 Transport hazard class(es)	5.1	5.1	5.1	5.1	
14.4 Packing group	III	III	III	III	
Label					
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; Seveso <i>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 Sulphate 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	Ox. Sol 3, H272 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) Eye irritation Category 2 (Eye Irrit. 2) Causes serious eye irritation (H319) May intensify fire; oxidisor (H272)
Training advice	

<b>Date of previous SDS</b>	September 2014
<b>Modifications in this version</b>	None.
<b>References</b>	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 Glasson Fertilizers for the consequences of its use or misuse in any particular circumstances.

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