

# Safety Data Sheet

According to Commission Regulation (EU) No 2015/830

Issue date 11/07/2013  
 Issue 2  
 Review date 21/07/2016  
 Review 3

## Ammonium Nitrate Solution < 80% AN

SECTION 1		Identification of the substance/mixture and of the company/undertaking			
1.1	Product identifier				
	Product commercial name	Nitrogen Fertilizer Solution			
	Chemical name	Mixture, main ingredient Ammonium Nitrate			
	Other names				
	Chemical formula	Mixture, main ingredient NH <sub>4</sub> NO <sub>3</sub>			
	EU index number (Appendix 1)	Not applicable			
	CE No	Not applicable			
	CAS No.	Not applicable			
	REACH or National product registration number	Not applicable			
1.2	Relevant identified uses of the substance or mixture and uses advised against				
	Identified uses	As a fertiliser and in the manufacture of mixtures.			
	Uses advised against	None			
1.3	Details of the supplier of the safety data sheet				
	Company name	FERTIBERIA. S.A.			
	Company address	Paseo de la Castellana, 259 D. Plantas 47 y 48 - 28046 Madrid			
	Company telephone number	Central: 91.586.62.00; Aviles factory: 985-57.78.50; Puertollano factory: 926.44.93.00; Sagunto Factory: 962.69.90.04			
	Company email for SDS	<a href="mailto:reachfertiberia@fertiberia.es">reachfertiberia@fertiberia.es</a>			
1.4	Emergency telephone number	Aviles factory: 985-57.78.50; Puertollano factory: 926.44.93.00; Sagunto Factory: 962.69.90.04			
SECTION 2		Hazards identification			
2.1	Classification of the substance or mixture*	According to Regulation EC 1272/2008 [CLP] Not hazardous.			
2.2	Label elements	Pictograms	Signal word	Hazard statements	Precautionary Statements
2.3	Other hazards				
	PBT/vBvP Criteria	In accordance with appendix XIII of the Regulation (EC) no. 1907/2006, it is not PBT or vPvB since it is an inorganic substance.			
	<u>Other hazards that do not involve product classification</u>				
	Physical and chemical hazards	When the AN solution is heated it can decompose releasing toxic fumes that contain nitrogen and ammonium oxides. Heating under confined conditions (closed containers) may lead to an explosive reaction. The addition of alkaline materials, such as lime, can cause ammonia gases to be released.			
	Health hazards	Fertilizers are basically harmless products when handled correctly. Nevertheless, the following points should be observed: <b>Contact with skin:</b> This solution does not attached the skin. Prolonged contact may cause mild dermatitis. <b>Contact with eyes:</b> Splashes in the eyes may cause mild conjunctivitis and burns. <b>Ingestion:</b> Small quantities are unlikely to cause toxic effects. In large quantities it can produce disorders in the gastrointestinal tract and in extreme cases the formation of methemoglobin can occur (blue baby syndrome) and cyanosis (indicted by blueness around the mouth). <b>Inhalation:</b> These solutions are handled cold so the release of gases is unlikely. <b>Long term local effects:</b> Unknown adverse effects. <b>Other: Fire and heating:</b> Inhaling decomposition gases containing nitrogen and ammonium oxides can cause irritation and have corrosive effects on the respiratory system. These gases may have delayed pulmonary oedema effects.			
	Environmental hazards	Ammonium nitrate is a nitrogen fertilizer. Heavy spillage may cause an adverse environmental impact such as eutrophication (developing undesirable flora) in confined surface waters or nitrate contamination. (See section 12).			

\* To understand the full meaning of hazard statements (H): see section 16

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SECTION 3 Composition/information on ingredients								
3.2	Name	% (w/w)	CAS No.	IUPAC	Index No R.1272/2008	REACH Registration Number	Classification Regulation 1272/2008	Specific concentration limits
	Ammonium nitrate	< 80%	6484-52-2	ammonium nitrate	---	01-2119490981-27-0028	Oxid. Solid 3 Eye Irrit. 2	
	Water	>20%	7732-18-5			Not required	Not classified	
SECTION 4 First aid measures								
4.1	Description of first aid measures							
	<b>General</b>	Seek medical attention when necessary.						
	<b>Inhalation</b>	At room temperature there are no hazardous fumes.						
	<b>Ingestion</b>	Do not induce vomiting. Rinse the mouth and give water or milk to drink. Seek medical attention if more than a small quantity has been ingested.						
	<b>Contact with skin</b>	Wash the affected area with plenty of water.						
	<b>Contact with eyes</b>	Wash or rinse the eyes with plenty of water for at least 10 minutes, including behind the eyelids. Remove contact lenses if present and easy to do. Seek medical attention if eye irritation persists.						
4.2	Most important symptoms and effects, both acute and delayed							
		Some effects on the lungs may be delayed.						
4.3	Indication of any immediate medical attention and special treatment needed							
		Inhalation of gases, from a fire or thermal decomposition, that contain nitrogen and ammonium oxides may cause irritation and have corrosive effects on the respiratory system. Administer oxygen, especially if there is blue colouring (methaemoglobin) around the mouth.						
SECTION 5 Firefighting measures								
5.1	Extinguishing media							
	<b>Suitable extinguishing media</b>	Water.						
	<b>Unsuitable extinguishing media</b>	Do not use chemical or foam extinguishers or attempt to suffocate the fire with sand or mist.						
5.2	Special hazards arising from the substance or mixture							
	<b>Special hazards</b>							
	<b>Thermal decomposition or product combustion hazards</b>	Nitrogen and ammonium oxides						
5.3	Advice for firefighters							
	<b>Specific firefighting methods</b>	Open doors and windows in the area to give maximum ventilation. Avoid breathing the smoke (toxic). Position yourself upwind of the fire. Do not contaminate the fertiliser with oils or other combustible materials.						
	<b>Special protective equipment for firefighting</b>	Use self contained breathing apparatus in case of smoke.						
SECTION 6 Accidental release measures								
6.1	Personal precautions, protective equipment and emergency procedures							
6.2	Environmental precautions							
		Take care to prevent contamination of water courses and drains and inform the competent authorities in case of accidental contamination of water courses.						
6.3	Methods and material for containment and cleaning up							
		Any spill of fertilizer must be immediately cleaned up. Recover by pumping up the spill if possible. Do not mix with sawdust or other combustible or organic material.						
6.4	Reference to other sections							
		See section 1 for contact data, section 8 for PPE and section 13 for waste disposal.						

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SECTION 7	Handling and storage	
7.1	<b>Precautions for safe handling</b>	
		Prevent contamination with combustible materials (e.g. gas-oil, greases, etc.) and other incompatible materials. When the product is handled for long periods, use appropriate personal protective equipment, e.g. gloves. Carefully clean the installations before carrying out maintenance and repair operations.
7.2	<b>Conditions for safe storage, including any incompatibilities</b>	
		Store in compliance with regulations RD 888/2006, (AF-1) regulations. Place away from sources of heat and flames. Always keep away from combustible materials and substances mentioned in section 10. In the storage area, ensure that strict tidiness and cleanliness standards are complied with.
	<b>Recommended and non-recommended packaging materials</b>	Suitable materials for containers are: steel, aluminium and synthetic plastics. Do not use copper and/or zinc.
7.3	<b>Specific end use(s)</b>	
		See section 1.2 and appendices for exposure scenarios.

*Note: stability and reactivity, see section 10*

SECTION 8	Exposure controls/personal protection								
8.1	<b>Control parameters</b>								
	<b>Exposure limit values</b>		<b>Component</b>	<b>CAS</b>					
			Ammonium nitrate	6484-52-2	Not established.				
	<b>Derived from the CSR</b>	<b>DNEL</b>		<b>Worker</b>		<b>consumer</b>			
				<b>systemic</b>	<b>industrial</b>	<b>professional</b>			
			<b>oral</b>	long term	Not applicable	Not applicable	12.8 mg/kg bw/day		
		<b>inhalation</b>	long term	37.6 mg/m <sup>3</sup>	37.6 mg/m <sup>3</sup>	11.1 mg/m <sup>3</sup>			
		<b>dermal</b>	long term	21.3 mg/Kg bw/day	21.3 mg/Kg bw/day	12.8 mg/kg bw/day			
		<b>PNEC</b>	<b>water</b>		<b>air</b>	<b>soil</b>	<b>microbiological</b>	<b>sediment</b>	<b>oral</b>
			fresh water: 0.45 mg/l salt water: 0.045 mg/l in intermittent releases: 4.5 mg/l	Not available	Insufficient data available	18 mg/l	Insufficient data available	Low bioaccumulative potential	
8.2	<b>Exposure controls</b>								
	<b>Engineering measures and hygiene controls</b>		Do not smoke or drink when handling. Wash hands after handling the product and before eating, drinking or smoking. Use the wash basin at the end of the work day.						
	<b>Personal protection measures</b>								
		<b>Eyes</b>	Safety glasses with side protection (EN 166) to prevent eye irritation. If projections are possible use panoramic safety goggles, or full face visor.						
		<b>Skin and body</b>	Work clothes.						
		<b>Hands</b>	Use suitable gloves (for example, rubber or pvc) when handling the product over long periods of time.						
		<b>Respiratory</b>	At room temperature there are no hazardous fumes.						
		<b>Thermal</b>							
	<b>Environmental exposure controls</b>		See section 6.						
	<i>Advice relating to personal protection is valid for high exposure levels.</i>								
	<i>Choose personal protection equipment suitable to exposure risks.</i>								

SECTION 9	Physical and chemical properties	
9.1	<b>Information on basic physical and chemical properties</b>	
	<b>Aspect</b>	Colorless clear liquid if free from crystals.
	<b>Colour</b>	Colourless
	<b>Odour</b>	Odourless
	<b>Molecular weight</b>	Not applicable
	<b>pH</b>	pH aqueous solution (100 g/l) 5.5-6.5
	<b>Boiling point</b>	< 130 °C
	<b>Melting point</b>	< 55 °C
	<b>Flash-point</b>	Non flammable
	<b>Flammability</b>	Non flammable
	<b>Explosive properties</b>	Non-explosive.
	<b>Auto-ignition temperature</b>	Non flammable
	<b>Decomposition temperature</b>	Begins to decompose above 170 °C
	<b>Lower explosive limit</b>	Not applicable
	<b>Upper explosive limit</b>	Not applicable
	<b>Oxidising properties</b>	Not classified as oxidizing agent.
	<b>Density at 20 °C</b>	< 1260 kg/m <sup>3</sup>
	<b>Vapour pressure at 100 °C</b>	< 39.6 kPa
	<b>Vapour density</b>	Not applicable
	<b>Partition coefficient n-octanol/water</b>	Not applicable
	<b>Viscosity</b>	Not available
	<b>Water solubility</b>	Miscible in all proportions

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9.2	Other information	Molecular weight 80 g/mol for the main ingredient (ammonium nitrate)				
<b>SECTION 10 Stability and reactivity</b>						
10.1	Reactivity	Stable under normal conditions of storage, handling and use (see section 7)				
10.2	Chemical stability	Stable under normal conditions of storage, handling and use (see section 7)				
10.3	Possibility of hazardous reactions	When it is heated above 170 °C it can decompose releasing NOx and Ammonia. Contamination with incompatible materials.				
10.4	Conditions that must be avoided	Proximity to sources of heat or fire. Contamination by incompatible materials. Heating above the boiling point increases the concentration and may reach decomposition (170 °C). Reducing the temperature below the crystallization point. Heating when confined. Welding or heating work of the equipment or plant that may contain fertiliser remnants, without preliminary cleaning to remove the product remnants. Reducing the pH by adding an acid.				
10.5	Incompatible materials	Inflammable materials, reducing agents, acids, alkalis, sulphur, chlorates, chlorides, chromates, nitrites, permanganate, metal powders and metal-containing substances such as copper, nickel, cobalt, zinc and their alloys.				
10.6	Hazardous decomposition products	In case of fire: see Section 5 When strongly heated it decomposes releasing toxic gases (e.g. NOx and ammonia). When it is in contact with alkaline materials, such as lime, ammonia gases may be produced.				
<b>SECTION 11 Toxicological information</b>						
11.1	Information on toxicological effects					
<b>Acute toxicity</b>						
	Component	CAS No.	Method	Species	Via	Result
	Ammonium nitrate	6484-52-2	OECD 401 OECD 402	rat rat rat	oral skin respiratory	LD50: 2950 mg/Kg bw. LD50: > 5000 mg/Kg bw. LC50: >88.8 mg/m3.
<b>Skin corrosion/irritation</b>						
	Component	CAS No.	Method	Species	Via	Result
	Ammonium nitrate	6484-52-2	OECD 404	Rabbit	skin	Non-irritant.
<b>Serious eye damage/irritation</b>						
	Component	CAS No.	Method	Species	Via	Result
	Ammonium nitrate	6484-52-2	OECD 405	Rabbit	eye	Irritant
<b>Respiratory or skin sensitisation</b>						
	Component	CAS No.	Method	Species	Via	Result
	Ammonium nitrate	6484-52-2	OECD 429	mouse	skin	Non-sensitising.
<b>Germ cell mutagenicity</b>						
	Component	CAS No.	Method	Species	Result	
	Ammonium nitrate	6484-52-2	OECD 471 OECD 473 OECD 476	bacteria Chromosomal aberrations mutation in mammal cells	Negative. Non-mutagenic. Ames test. Negative. Non-mutagenic. Negative. Non-mutagenic.	
<b>Carcinogenicity</b>						
	Component	CAS No.	Method	Species	Via	Result
	Ammonium nitrate	6484-52-2		rat	All	Non carcinogenic.
<b>Reproductive toxicity</b>						
	Component	CAS No.	Method	Species	Via	Result
	Ammonium nitrate	6484-52-2	OECD 422	rat	oral	-Effects on fertility: NOAEL: ≥1500 mg/kg bw/d. -Toxicity for development: NOAEL: ≥1500 mg/kg bw/d
<b>Single and Repeated exposure (STOT)</b>						
	Component	CAS No.	Method	Species	Via	Result
	Ammonium nitrate	6484-52-2	OECD 422 OECD 453	rat rat rat	oral (28 days) oral (52 weeks) oral (13 weeks) Inhalation (2 s)	Sub-acute oral route. NOAEL: ≥ 1500 mg/kg body weight/day. Chronic oral route. NOAEL: 256 mg/kg body weight/day. Sub-chronic oral route. NOAEL: 886 mg/kg body weight/day. Inhalation route. NOAEC (systemic): ≥ 185 mg/m3
<b>Aspiration hazard</b>						
No known significant effects or critical hazards.						
<b>SECTION 12 Ecological information</b>						
12.1	Toxicity					
<b>Water toxicity</b>						
	Component	CAS No.		Fish ( <i>Cyprinus carpio</i> )	Crustaceans	Algae (benthic diatoms)
	Ammonium nitrate	6484-52-2	Short term	LC50(48h) = 447 mg/l.	EC50/LC50 (48h) = 490 mg/l (of potassium nitrate) ( <i>Daphnia magna</i> )	LC50/EC50 (10 days) > 1700 mg/l (of potassium nitrate)
			Long term	Not necessary.	NOEC (168h) = 555 mg/l ( <i>Bullia digitalis</i> )	Not available
<b>Land Toxicity</b>						
	Component	CAS No.	Macroorganisms	Microorganisms	Land plants	Other organisms
	Ammonium nitrate	6484-52-2	Not scientifically justified	Not scientifically justified	Not scientifically justified	Not available
<b>Microbiological activity in waste water treatment plants</b>						

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Component	CAS No.	Toxicity for aquatic microorganisms
Ammonium nitrate	6484-52-2	CE50/CL50 (180 min) >1000 mg/l (of sodium nitrate)

### 12.2 Persistence and degradability

Component	CAS No.	Degradation
Ammonium nitrate	6484-52-2	<b>Hydrolysis</b> Non-hydrolysable. Test not necessary.
		<b>Photolysis</b> No information available
		<b>Biodegradation</b> Not necessary, inorganic substance.

### 12.3 Bioaccumulative potential

Component	CAS No.	Octanol-water partition coefficient (Kow)	Bioconcentration factor (BCF)	Comments
Ammonium nitrate	6484-52-2	Not applicable. Inorganic substance.	-	

### 12.4 Mobility in soil

Component	CAS No.	Result
Ammonium nitrate	6484-52-2	low absorption potential (based on its properties)

### 12.5 Results of PBT and vPvB assessment

Not required. Inorganic substance. See REACH appendix XIII.

### 12.6 Other adverse effects

No more information.

## SECTION 13 Disposal considerations

### 13.1 Waste treatment methods

Depending on the degree and nature of contamination, dispose of it as fertilizer on the field or as raw material. Empty containers by shaking them to remove as much as possible of their content. If approved by the local authorities, empty packaging can be disposed of as a non-hazardous material or returned for recycling.

## SECTION 14 Transport information

14.1 - 14.6	Regulatory Information	UN Number	Proper shipping name	Class	Packing group	Label	Environmental hazards	Special precautions for users
	ADR/RID ADNR IMDG IATA						NOT CLASSIFIED	

### 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: Not applicable

## SECTION 15 Regulatory information

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

Regulation 2003/2003 (fertilisers)  
 Regulation 1907/2006 (REACH). Entry 58 of appendix XVII.  
 Regulation 1272/2008 (CLP)  
 R.D. 506/2013 (fertilizers)  
 R.D. 374/2001 (Chemical agents)  
 RD. 888/2006, which approves the Regulations for the storage of fertilizers based on ammonium nitrate, with a content of nitrogen equal to or less than 28% by mass. (AF-1)

### 15.2 Chemical Safety Assessment

Assessment of Chemical Safety carried out for the main ingredient, Ammonium Nitrate as a substance.

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SECTION 16	Other information	
	<b>Hazard statements</b>	None
	<b>Precautionary statements</b>	None
	<b>Bibliographical references and data sources</b>	Chemical Safety Assessment for Ammonium Nitrate; Guidance documents EFMA/FERTILIZER EUROPE; Data for TFI HPV; NOTOX <b>Not classified as "eye irritant" based on negative results obtained in tests conducted by EFMA / FERTILIZER EUROPE.</b>
	<b>Abbreviations and acronyms</b>	ELV-DE: Environmental limit value (daily exposure) ELV-ST Environmental limit value (short term) NOAEL: No observable adverse effect level LD50: Lethal dose 50% LC50: Lethal concentration 50% EC50: Effective concentration 50% DNEL: Derived no effect level PNEC: Predicted no effect concentration LOEC: Lowest observed effect concentration NOEC: No observed effect concentration NOAEC: No observed adverse effect concentration
	<b>Adequate training for workers</b>	Obligatory training in occupational risk prevention
	<b>Date of prior SDS</b>	Version 2 dated 11.07.13
	<b>Modifications made to present revision</b>	Adaptation to the Commission Regulation (EU) No 2015/830. Update of current regulations
<p>The information contained in this Safety Data Sheet is given in good faith. It is accurate to the best of our knowledge and belief and represents the most up to date information about the product at the time of publication. The information given in this data sheet does not constitute or replace the user's own assessment of workplace risks as required by other health and safety legislation.</p>		