

Safety Data Sheet

In accordance with Commission Regulation (EU) No 2015/830



Publication date: 13.10.2022

Edition: 2

Revision date: 13.10.2022

Revision: 1

AMMONIUM SULPHATE

SECTION 1		Identification of the substance/mixture and of the company/undertaking
1.1	Product identifier	
	Trade name	AMMONIUM SULPHATE 20,5; AMMONIUM SULPHATE
	Code	DS-075
	Chemical name	Ammonium sulphate
	Chemical formula	$(\text{NH}_4)_2\text{SO}_4$
	Index Number	Not applicable.
	EINECS Number	231-984-1
	CAS Number	7783-20-2
	Registration Number	-
1.2	Relevant identified uses of the substance or mixture and uses advised against	
	Application of the substance / the mixture	Industrial uses: Catalyst (resin of aminoplastic resins); auxiliary for leather tanning. Professional uses: liquid fertigation in the soil; outdoor mixing; fertigation at open field; auxiliary for leather tanning, sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at dedicated facilities; liquid fertigation at open field (non industrial spraying); indoor mixing; greenhouse liquid fertigation in the soil. Consumer uses: fertilization at open field; indoor use of fertilizers.
	Uses advised against	Others than those indicated.
1.3	Details of the supplier of the safety data sheet	ADP – Fertilizantes, S.A. Estrada Nacional nº 10 2615-907 Alverca Portugal (00351) 210 300 400 e-mail: fdsinfo@grupofertiberia.com
1.4	Emergency telephone number	SOPAC - Sociedade Produtora de Adubos Compostos S.A.- +351 265030496 (Only available during office hours; Monday-Friday; 09:00-18:00)

SECTION 2		Hazards identification
2.1	Classification of the substance or mixture according Regulation (EC) n° 1272/2008 (CLP)	This substance is not classified as dangerous according to Regulation (EC) No 1272/2008 [EU-GHS / GB CLP].
	2.2	Label elements
	Hazard pictograms	Not applicable.
	Signal word	Not applicable.

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	Hazard-determining components of labelling	Not applicable.	
	Hazard statements	Not applicable.	
	Precautionary statements	P102 Keep out of reach of children. P270 Do not eat, drink or smoke when using this product.	
	Additional information	Not applicable.	
	Supplemental information on the label	Not applicable.	
	Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	Not applicable.	
	Special packaging requirements	Not applicable.	
	Containers to be fitted with child-resistant fastenings	Not applicable.	
	Tactile hazard warning	Not applicable.	
2.3	Other hazards		
	Other hazards which do not result in classification	None known.	
	Results of the PBT and vPvB assessment	Not applicable.	
SECTION 3 Composition/information on ingredients			
3.1	Substances		
	Name	EC Number	CAS Number
	Ammonium sulphate	231-984-1	7783-20-2
3.2	Mixtures		
	Not applicable.		
	Additional indications	For the wording of the listed hazard phrases refer to section 16.	
SECTION 4 First aid measures			
4.1	Description of first aid measures		
	General information	Provide medical assistance to those affected. People who dispense first aid are advised to wear personal protective equipment. There may be delayed effects on exposure.	

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	Inhalation	After inhalation of dust. Fresh air. After inhalation of decomposition products: Keep patient calm, remove to fresh air, seek medical attention. After inhalation of decomposition products: Keep patient calm, remove to fresh air, seek medical attention.
	Ingestion	Rinse mouth with water. Do not induce vomiting. If patient is conscious, give water to drink. If patient feels unwell, seek medical attention.
	Skin contact	Rinse with plenty of water. Remove contaminated clothing and wash before reuse. If irritation persists, seek medical attention.
	Eye contact	Irrigate with plenty of water for at least 10 minutes. Get medical attention.
4.2	Most important symptoms and effects, both acute and delayed	
	Eye contact	No significant effects or critical hazards are known.
	Inhalation	After inhalation of decomposition products: Risk of pulmonary oedema. Symptoms may appear later.
	Skin contact	No significant effects or critical hazards are known.
	Ingestion	No known significant effects or critical hazards.
4.3	Indication of any immediate medical attention and special treatment needed	
	No action involving personal risk or without adequate training should be taken. Avoid direct mouth-to-mouth resuscitation, as it can be dangerous for the person providing the help. Use other methods for resuscitation, preferably oxygen or compressed air equipment. Treat according to the following indications:	
	Notes to physician	Treat symptomatically.
	Specific treatments	After inhalation of decomposition products: Prophylaxis of pulmonary oedema.
SECTION 5 Firefighting measures		
5.1	Extinguishing media	
	The product is not flammable.	
	Suitable extinguishing agents	Water spray, extinguishing powder, foam, carbon dioxide.
	Unsuitable extinguishing agents for safety reasons	Not applicable.
5.2	Special hazards arising from the substance or mixture	
	Formation of toxic gases is possible during heating or in case of fire.	
	Hazardous thermal decomposition products	At temperatures of 235 °C the following may be emitted: ammonia.
5.3	Advice for firefighters	
	Open warehouse doors and windows for maximum ventilation. Fire-fighting personnel should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face mask operating in positive pressure mode. Clothing for fire-fighting personnel (including helmets, protective boots) should conform to European standard EN 469 and gloves to EN 659. It should provide a basic level of protection for chemical incidents and should be fire resistant. The facility shall have sufficient protective equipment available to deal with fires.	
SECTION 6 Accidental release measures		
6.1	Personal precautions, protective equipment and emergency procedures	
	Wear protective clothing.	
	For non-emergency personnel	

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	<p>Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. In case of non-flammable spills and leaks, wear vapor protective clothing. Stop leak if you can do so without risk. Keep unnecessary persons away, isolate the danger area and prevent entry. Eliminate sources of combustion.</p> <p>Keep upwind, out of low areas and ventilate confined spaces before entering. Assess the affected area to determine if evacuation is necessary. If it is necessary to evacuate the danger zone, you should follow the advice of an expert. If sheltering in place, tape windows and doors, close outside air intakes (attic fans, etc.) and place a damp towel or cloth over your face (if necessary).</p>	
	For emergency responders	
	If specialized clothing is required to deal with the spill, make note of any information on suitable and unsuitable materials. See also the information in "For non-emergency personnel".	
6.2	Environmental precautions	
	In case of accidental spills and leaks avoid dispersal of spilled material, runoff and contact with soil, watercourses (surface and groundwater), drains and sewers. Inform the competent authorities if the product has caused adverse impacts (sewers, watercourses, soil or air).	
6.3	Methods and material for containment and cleaning up	
	In case of accidental spills and leaks, avoid dispersal of spilled material. Use water spray or foam to control vapors. Make a protective barrier and ensure closure of drains with suitable containment material. Absorb with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep and shovel into suitable containers for disposal.	
6.4	Reference to other sections	
	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.	
SECTION 7	Handling and storage	
7.1	Precautions for safe handling	
	Technical precautionary measures	Wear appropriate personal protective equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering food areas. Avoid contact with eyes, skin or clothing. Do not breathe vapours or mist. Do not ingest. Avoid release to the environment. Keep in original container or approved alternative made of compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residues and may be hazardous. Do not reuse container.
	Advice on general occupational hygiene	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
7.2	Conditions for safe storage, including any incompatibilities	
	Keep only in the original container. Keep container tightly closed. Store in a cool, well-ventilated place, away from heat, direct sunlight and incompatible substances.	
7.3	Specific end use(s)	

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Use only as described in section 1.2.

SECTION 8 Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits	There is no limit of occupational exposure value.
Recommended monitoring procedures	If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of ventilation or other control measures and/or the need to use respiratory protective equipment. Monitoring standards such as the following may be used as reference: European Standard EN 689 (Atmospheres in the workplace. Guidelines for the evaluation of inhalation exposure of chemical agents for comparison with limit values and measurement strategy), European Standard EN 14042 (atmospheres in the workplace. Guidelines for the application and use of procedures to assess exposure to chemical and biological agents) European Standard EN 482 (atmospheres in the workplace. General requirements for the performance of procedures for measuring chemical agents). National guidance documents on methods for the determination of hazardous substances should also be used as a reference.
Derived effect levels	No DELs available.
Predicted effect concentrations	No PECs available.
Ingredients with limit values that require monitoring at the workplace	Not required.

DNEL

Substance				7783-20-2
				Ammonium sulphate
Industrial/Professional worker	Inhalation (mg/m3)	Long-term	Systemic	11,167 mg/m3
			Local	No hazard has been identified
		Short-term	Systemic	No hazard has been identified
			Local	No hazard has been identified
	Dermal (mg/kg pc/día)	Long-term	Systemic	42,667 mg/kg bw/d
			Local	No hazard has been identified
		Short-term	Systemic	No hazard has been identified
			Local	No hazard has been identified
	Ocular (mg/kg pc/día)	Long-term	Systemic	Not available
			Local	Not available
		Short-term	Systemic	No hazard has been identified
			Local	No hazard has been identified

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Consumer	Inhalation (mg/m3)	Long-term	Systemic	1,667 mg/m3
			Local	No hazard has been identified
		Short-term	Systemic	No hazard has been identified
			Local	No hazard has been identified
	Dermal (mg/kg pc/day)	Long-term	Systemic	12,8 mg/kg bw/d
			Local	No hazard has been identified
		Short-term	Systemic	No hazard has been identified
			Local	No hazard has been identified
	Oral (mg/kg pc/day)	Long-term	Systemic	6,4 mg/kg bw/d
			Local	No hazard has been identified
		Short-term	Systemic	No hazard has been identified
			Local	No hazard has been identified
	Ocular (mg/kg pc/day)	Long-term	Systemic	Not available
			Local	Not available
		Short-term	Systemic	No hazard has been identified
			Local	No hazard has been identified
PNEC				
Substance				7783-20-2
				Ammonium sulphate
Fresh water (mg/L)				0,312 mg/L
Salt water (mg/L)				0,031 mg/L
STP (mg/L)				16,18 mg/L
Fresh water sediment (mg/L)				0,063 mg/kg sediment dw
Salt water sediment (mg/L)				Insufficient data regarding hazards
Air (mg/L)				No hazard has been identified
Soil (mg/L)				62,6 mg/kd suelo dw
Predators (secondary poisoning) (mg/L)				The substance has no bioaccumulation potential
Components with biological limit values			Non-existent.	
Additional indications			The Occupational exposure limits lists valid during the making were used as basis.	
8.2	Exposure controls			

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	Appropriate engineering controls	<ul style="list-style-type: none"> - Ensure adequate ventilation. - Apply technical measures to comply with professional exposure limits. - Consult the protective measures listed in sections 7 and 8. 	
	Personal protective measures, such as personal protective equipment	General protection and hygiene measures	<p>Wash completely the hands, forearms and face after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.</p> <p>Use the appropriate techniques to remove the contaminated clothes. Wash the contaminated clothes before reusing. Verify that the eyes washing stations and safety showers were near to working stations.</p>
		Respiratory protection	<p>If ventilation is inadequate, use a suitable dust mask or respirator in case of dust concentration with an appropriate filter (EN 143, 149, filters P2, P3).</p> <p>If ammonia is produced: E.g. respirator with green K-type filter.</p>
		Hand protection	Gloves if there is potential contact, further protective measures for the body are generally not necessary.
		Glove material	Rubber gloves
		Other	Use personal protective equipment during use and handling of the product.
		Eye/face protection	<p>Safety eyewear complying with an approved standard EN 166:2002 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, use the following protection, unless the assessment indicates a higher degree of protection: safety glasses with side shields.</p> <p>Recommended: Eyewear, mask or other protection that covers the entire face must be used if there is a possibility of being exposed to aerosols or splashes, or if hot material is handled.</p>
		Thermal hazards	Not available.
	Environmental exposure controls	General ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.	
SECTION 9	Physical and chemical properties		
9.1	Information on basic physical and chemical properties		
	Appearance	Powdery solid with lumps.	
	Colour	Grey	
	Odour	Odourless	
	Odour threshold	Not available.	
	pH	Not determined.	
	Melting point/freezing point	>280 ° C	
	Initial boiling point and boiling range	Not applicable due to physico-chemical characteristics	
	Flash point	Not applicable due to physico-chemical characteristics	

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	Evaporation rate	Not available				
	Flammability	Non-flammable				
	Upper/lower flammability or explosive limits					
	Lower	Not available.				
	Upper	Not available.				
	Vapour pressure	Not applicable due to physico-chemical characteristics				
	Vapour density	Not available.				
	Relative density	at 25 ° C	1.77			
	Solubility					
	In water	at 20 ° C	760 g/l			
	Partition coefficient: n-octanol/water	at 25 ° C	-5.1 log POW			
	Auto-ignition temperature	Not available.				
	Decomposition temperature	Not determined.				
	Viscosity					
	Kinematic	Not available.				
	Dynamic	Not available.				
	Explosive properties	The product is not explosive				
	Oxidising properties	Not available				
9.2	Other information	No additional information No further relevant information available.				
SECTION 10 Stability and reactivity						
10.1	Reactivity	Stable under recommended storage conditions.				
10.2	Chemical stability	Chemically stable under the indicated storage, handling and use conditions.				
10.3	Possibility of hazardous reactions	When heated strongly, it decomposes releasing toxic gases.				
10.4	Conditions to avoid	Contact with alkalis.				
10.5	Incompatible materials	Alkaline nitrite, alkalis.				
10.6	Hazardous decomposition products	Ammonia				
SECTION 11 Toxicological information						
11.1	Information on toxicological effects					
	Acute toxicity					
	Component	CAS number	Method	Species	Route	Result

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Ammonium sulphate	7783-20-2	OECD 401 OECD 433 OECD 434	Rat Rat Rat	Oral Inhalation Cutaneous	DL50: 2000-4250 mg/kg bw. CL50(8h) > 1000 mg/m3 air DL50 > 2000 mg/kg bw
Based on available data, the classification criteria are not met.					
Skin corrosion/irritation					
Component	CAS number	Method	Species	Route	Result
Ammonium sulphate	7783-20-2	Not specified	Rabbit	Cutaneous	Non irritant
Based on available data, the classification criteria are not met.					
Serious eye damage/irritation					
Component	CAS number	Method	Species	Route	Result
Ammonium sulphate	7783-20-2	Not specified	Rabbit	Ocular	Does not generate eye irritation
Based on available data, the classification criteria are not met.					
Respiratory or skin sensitisation					
Component	CAS number	Method	Species	Route	Result
Ammonium sulphate	7783-20-2	Not specified	Cerdo de Guina	Cutaneous	Non sensitising
Based on available data, the classification criteria are not met.					
Germ cell mutagenicity					
Component	CAS number	Method	Species	Route	Result
Ammonium sulphate	7783-20-2	OECD 471 Not specified	Bacteria Mutation of mammal cells		Non mutagenic
Based on available data, the classification criteria are not met.					
Carcinogenicity					
Component	CAS number	Method	Species	Route	Result
Ammonium sulphate	7783-20-2	OECD 453	Rat	Oral	Non carcinogenic
Based on available data, the classification criteria are not met.					
Reproductive toxicity					
Component	CAS number	Method	Species	Route	Result
Ammonium sulphate	7783-20-2	OECD 422	Rat	Oral	Effects on fertility : NOAEL: 1500 mg/kg bw/d.
Based on available data, the classification criteria are not met.					
STOT- single exposure					
Component	CAS number	Method	Species	Route	Result
Ammonium sulphate	7783-20-2	Not available	Not available	Not available	Not available
Based on available data, the classification criteria are not met.					
STOT-repeated exposure					
Component	CAS number	Method	Species	Route	Result
Ammonium sulphate	7783-20-2	OECD 453 Not specified	Rat	Oral Inhalation	NOAEL: 256 mg/kg bw/d. NOAEL: 300 mg/m3.
Based on available data, the classification criteria are not met.					
Aspiration hazard					
Component	CAS number	Result			
Ammonium sulphate	7783-20-2	No significant effects or critical hazards are known.			

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

SECTION 12	Ecological information					
12.1	Toxicity					
	Aquatic toxicity					
	Component	N° CAS		Fish	Crustacea	Algae
	Ammonium sulphate	7783-20-2	Short term	CL50 > 53 mg/l	EC10: 5,29 mg/l	CE50: 169 mg/l
			Long term	CE10. 3,12 mg/l	CE50: 1600 mg/l	Not available
	Terrestrial toxicity					
	Component	N° CAS	Macro-organism	Micro-organism	Terrestrial plants	Other organisms
	Ammonium sulphate	7783-20-2	CE50/CL50: 201 mg/kg soil bw	Not available	Not available	-
	Microbiological activity in wastewater treatment plants					
	Component	N° CAS	Toxicity to aquatic micro-organisms			
	Ammonium sulphate	7783-20-2	Not available			
12.2	Persistence and degradability					
	Component	N° CAS	Degradation			
	Ammonium sulphate	7783-20-2	Hydrolysis	Hydrolysis is not seen. It is not necessary.		
			Photolysis	Photodegradation is not seen. It is not necessary.		
			Biodegradation	Not necessary since the substance is inorganic		
12.3	Bioaccumulative potential					
	Component	N° CAS	Octanol-water partition coefficient (Kow)	Bioaccumulation factor (BFC)	Observations	
	Ammonium sulphate	7783-20-2	Not applicable	-	-	
12.4	Mobility in soil					
	Component	N° CAS	Result			
	Ammonium sulphate	7783-20-2	Due to the physico-chemical properties of ammonium sulfate, water is expected to be the main medium. According to its high solubility in water, a low geoaccumulation potential and high mobility in the soil were expected.			
12.5	Results of PBT and vPvB assessment					
	Not applicable.					
12.6	Other adverse effects					
	Significative effects o critics risks are not known.					
SECTION 13	Disposal considerations					
13.1	Waste treatment methods					

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Methods of disposal	<p>Waste management (disposal and recovery) : Consult the authorised waste manager for recovery and disposal operations, in accordance with Annex 1 and Annex 2 (Directive 2018/851/EC, Law 7/2022 of 8 April, on waste and contaminated soil for a circular economy).. Packaging: According to codes 15 01 (Commission Decision 2014/955/EU), if the packaging has been in direct contact with the product, it should be treated in the same way as the product itself, otherwise it should be treated as non-hazardous waste. Discharge into waste water is not recommended. See section 6.2. Waste management provisions : In accordance with Annex II of Regulation (EC) No 1907/2006 (UK REACH), the Community or national provisions on waste management are presented. Community legislation: Directive 2018/851/EC, Commission Decision 2014/955/EU, Regulation (EU) no. 1357/2014 and the national legislation.</p>
Hazardous waste code	Basing on its current knowledge, the supplier does not consider this product as a hazardous waste.

SECTION 14 Transport information

	Regulatory information	ADR/RID	ADNR	IMDG	IATA
14.1	UN number	-			
14.2	UN proper shipping name	-	-		
14.3	Transport hazard class(es)				
	Class	-	-		
	Label	-	-		
14.4	Packing group	-			
14.5	Environmental hazards	Product not classified as hazardous to the aquatic environment.			
14.6	Special precautions for user	Not defined. See the relevant information, such as handling, in other sections of this document.			
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/legislation specific for the substance or mixture	
	GB Regulation (EC) No 1907/2006 (REACH)	This product complies with the UK REACH Regulation.
	Named dangerous substances - ANNEX VI (CLP)	None substance listed.
	SEVESO Category	Not applicable.
	Qualifying quantity (tonnes) for the application of lower-tier requirements	Not applicable.
	Qualifying quantity (tonnes) for the application of upper-tier requirements	Not applicable.

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	Regulation (EC) No 1907/2006 - ANNEX XVII	Not applicable.
15.2	Chemical safety assessment	
	No chemical safety assessment has been performed for this substance because it is not a substance classified as hazardous.	
SECTION 16	Other information	
	Relevant phrases	Not applicable.
	Abbreviations and acronyms	<p>ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road).</p> <p>STP: Sewage treatment plant.</p> <p>OECD: Organisation for Economic Co-operation and Development.</p> <p>NOAEL: No observed adverse effect level.</p> <p>IMDG: International Maritime Code for Dangerous Goods.</p> <p>IATA: International Air Transport Association.</p> <p>GHS: Globally Harmonised System of Classification and Labelling of Chemicals.</p> <p>CAS: Chemical Abstracts Service (division of the American Chemical Society).</p> <p>DNEL: Derived No-Effect Level (UK REACH).</p> <p>PNEC: Predicted No-Effect Concentration (UK REACH).</p>
	Data compared to the previous version altered	It is the first version.
	References	<p>This safety data sheet has been prepared in accordance with:</p> <ul style="list-style-type: none"> - ANNEX II: Guidance for the preparation of Safety Data Sheets of Regulation (EC) No 1907/2006 (Regulation (EU) 2015/830) based on the data included in the chemical safety report of registered substances. - Guidance available on the European Chemicals Agency (ECHA) website: (http://echa.europa.eu/). - Guidance for the compilation of safety data sheets for fertilizer materials (www.fertilizerseurope.com).
	Methods used for the classification of the mixture (Article 9 of Regulation (EC) No 1272/2008)	Classification and Labeling in accordance with the principle of extrapolation of Regulation No. 1272/2008 (CLP).
	Advice on any training appropriate for workers to ensure protection of human health and the environment	Minimum training in the prevention of occupational hazards is recommended for personnel who will handle this product, in order to facilitate the understanding and interpretation of this safety data sheet, as well as the product label.

The information contained in this safety data sheet is provided in good faith and its accuracy is based on knowledge of the product at the time of publication. The information presented is only intended to describe the product from the point of view of human and environmental protection and safety, and therefore cannot be regarded as product specifications. It does not imply acceptance of any commitment or legal responsibility on the part of the Company, for the consequences of its use or misuse in any circumstances. The information provided is considered accurate and current at the time of this edition, referring only to the product and may not be valid in compositions or formulations with other products. The responsibility for its use belongs to the users.