

# Safety Data Sheet

In accordance with Commission Regulation (EU) No 2020/878





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## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

SECTION 1		Identification of the substance/mixture and of the company/undertaking
1.1	Product identifier	
	Trade name	Soluble ammonium nitrate; Fertibersol - NA, Fertibersol Antech, Fertibersol Nitro
	Synonyms	Soluble ammonium nitrate fertilizer, ammonia salt and nitric acid; Ammonium nitrate 34.5, Soluble ammonium nitrate fertilizer (without ammonium sulfate)
	Code	FDS-003
	Chemical name	ammonium nitrate
	Chemical formula	NH <sub>4</sub> NO <sub>3</sub>
	Index Number	Not applicable.
	EINECS Number	229-347-8
	CAS Number	6484-52-2
	Registration Number	-
	UFI	Not applicable due to it's a substance
1.2	Relevant identified uses of the substance or mixture and uses advised against	
	Application of the substance / the mixture	Fertiliser
	Uses advised against	Others than those indicated.
1.3	Details of the supplier of the safety data sheet	Fertiberia, S.A. 27, Agustín de Foxa Street pta. 11 28036 Madrid Madrid (Spain) +34 91.586.62.00; fdsinfo@grupofertiberia.com
1.4	Emergency telephone number	Central: +34 915 86 62 00 (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)	Ox. Sol. 3 H272 May intensify fire; oxidiser. Eye Irrit. 2 H319 Causes serious eye irritation.
2.2	Label elements	
	Hazard pictograms	 
	Signal word	Warning

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	<b>Hazard-determining components of labelling</b>	Not applicable.
	<b>Hazard statements</b>	H272 May intensify fire; oxidiser. H319 Causes serious eye irritation.
	<b>Precautionary statements</b>	P102 Keep out of reach of children. P270 Do not eat, drink or smoke when using this product. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P220 Keep away from clothing and other combustible materials. P280 Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention. P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
	<b>Additional information</b>	Acquisition, possession or use by private individuals is subject to restrictions.
	<b>Supplemental information on the label</b>	Not applicable.
	<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	Entry 58: Shall not be placed on the market for the first time after 27 June 2010 as a substance or in mixtures containing more than 28 % by weight of nitrogen in relation to ammonium nitrate for use as a solid fertiliser, whether straight or compound, unless it complies with the technical provisions concerning ammonium nitrate fertilisers of high nitrogen content set out in Annex III to Regulation (EC) No 2003/2003 and its respective amendments.
	<b>Special packaging requirements</b>	Not applicable.
	<b>Containers to be fitted with child-resistant fastenings</b>	Not applicable.
	<b>Tactile hazard warning</b>	Not applicable.
<b>2.3</b>	<b>Other hazards</b>	
	<b>Other hazards which do not result in classification</b>	None known.
	<b>Results of the PBT and vPvB assessment</b>	Not applicable.

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SECTION 3 Composition/information on ingredients			
<b>3.1</b>	<b>Substances</b>		
	<b>Name</b>	<b>EC Number</b>	<b>CAS Number</b>
	Ammonium nitrate	229-347-8	6484-52-2
<b>3.2</b>	<b>Mixtures</b>		
	Not applicable.		
	<b>Additional indications</b>	For the wording of the listed hazard phrases refer to section 16.	
SECTION 4 First aid measures			
<b>4.1</b>	<b>Description of first aid measures</b>		
	<b>General information</b>	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.	
	<b>Inhalation</b>	Remove from exposure. In severe cases, or if recovery is not rapid or complete, seek medical attention.	
	<b>Ingestion</b>	Wash out mouth with water. Move exposed person to fresh air. Keep person warm and at rest. If material has been ingested and the exposed person is conscious, give small amounts of water to drink. Stop if the exposed person feels unwell, as vomiting may be dangerous. Do not induce vomiting unless instructed to do so by medical personnel. If vomiting occurs, keep the head down so that vomit does not enter the lungs. Get medical attention if symptoms occur. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Keep airway open. Loosen tight clothing, such as collar, tie, belt or waistband.	
	<b>Skin contact</b>	Rinse with plenty of water. Remove contaminated clothing and wash before reuse. If irritation persists, seek medical attention.	
	<b>Eye contact</b>	Flush eyes with water for at least 15 minutes. Avoid the affected rub or close the eyes. In the case of the injured person uses contact lenses, they should be removed when they are not stuck in the eyes, otherwise further damage may occur. In all cases, after washing, seek medical advise as quickly as possible with the SDS of the product.	
<b>4.2</b>	<b>Most important symptoms and effects, both acute and delayed</b>		
	<b>Eye contact</b>	Causes eye irritation. This irritation may cause redness and swelling of the eyes.	
	<b>Inhalation</b>	No known significant effects or critical hazards.	
	<b>Skin contact</b>	Skin irritation and skin sensitisation.	

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	<b>Ingestion</b>	For ammonium salts in general: symptoms of local irritation, nausea, vomiting, diarrhoea. Systemic effect: after ingestion of very large quantities: drop in blood pressure, collapse, CNS disorders, spasms, narcotic states, respiratory paralysis, haemolysis. Gastrointestinal disturbances, blood disorders, methaemoglobinaemia with headache, cardiac arrhythmia, drop in blood pressure, dyspnoea and spasms, key symptom: cyanosis (blue colour of blood).
<b>4.3</b>	<b>Indication of any immediate medical attention and special treatment needed</b>	
	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:	
	<b>Notes to physician</b>	Treat symptomatically.
	<b>Specific treatments</b>	There is no specific treatment. It depends on specialized medical observation.
<b>SECTION 5</b>	<b>Firefighting measures</b>	
<b>5.1</b>	<b>Extinguishing media</b>	
	The product is not flammable.	
	<b>Suitable extinguishing agents</b>	Fire-extinguishing powder Dry sand
	<b>Unsuitable extinguishing agents for safety reasons</b>	None.
<b>5.2</b>	<b>Special hazards arising from the substance or mixture</b>	
	Has a fire-promoting effect due to release of oxygen. Possible explosive decomposition when heated. Ambient fire may release hazardous vapours.	
	<b>Hazardous thermal decomposition products</b>	Nitrogen oxides, nitrous gases, ammonia.
<b>5.3</b>	<b>Advice for firefighters</b>	
	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.	
<b>SECTION 6</b>	<b>Accidental release measures</b>	
<b>6.1</b>	<b>Personal precautions, protective equipment and emergency procedures</b>	
	Wear protective clothing.	
	<b>For non-emergency personnel</b>	

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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>	
	<b>For emergency responders</b>	
	Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.	
<b>6.2</b>	<b>Environmental precautions</b>	
	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).	
<b>6.3</b>	<b>Methods and material for containment and cleaning up</b>	
	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.	
<b>6.4</b>	<b>Reference to other sections</b>	
	See Section 1 for information on contact in case of emergency. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.	
<b>SECTION 7</b>	<b>Handling and storage</b>	
<b>7.1</b>	<b>Precautions for safe handling</b>	
	<b>Technical precautionary measures</b>	Wear appropriate personal protective equipment. Avoid contact with eyes, skin or clothing. Do not breathe vapors or mist. Do not ingest. Avoid release to the environment. Keep in original container or approved alternative made of a compatible material, kept tightly closed when not in use. Empty containers retain product residues and may be hazardous. Do not reuse container. Avoid handling incompatible substances, see section 7.2. and 10.
	<b>Advice on general occupational hygiene</b>	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.

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<b>7.2</b>	<b>Conditions for safe storage, including any incompatibilities</b>	
	<p>Due to the risk of fire and decomposition of this product, the following guidelines are established:</p> <ul style="list-style-type: none"> <li>- Dust generation should be kept to a minimum. Storerooms shall be designed with adequate thermal insulation to ensure that the product temperature does not exceed 32 °C, which is the only way to avoid dust formation and the associated hazards.</li> <li>- Reducing agents, acids, alkalis, sulphur, chlorates, chromates, nitrites, permanganates and metal powders or substances containing metals such as copper, cobalt, nickel, zinc and their alloys shall not be stored next to combustible materials (gas-oil, oils, greases, wood, paper, etc.).</li> </ul> <p>It shall also be kept away from stacks of hay, straw, grain, seeds and organic matter in general.</p> <ul style="list-style-type: none"> <li>- These fertilisers shall be stored in such a way as to avoid mixing with fertilisers other than solid ammonium nitrates. For this purpose and in case of bulk storage, the piles must be separated by walls or solid walls. If this is not possible, the minimum distance between the edges of the base of the piles shall be 8 m, provided that the fertilisers stored adjacent to the piles are not ammonium nitrates, in which case the distance may be 5 m.</li> </ul> <p>Maximum care shall be taken to ensure that these fertilisers do not come into contact with urea or fertilisers with a risk of self- sustaining decomposition under any circumstances.</p> <ul style="list-style-type: none"> <li>- The height of stacks of both packaged and bulk product must be at least 1 m below eaves, rafters, lighting points and electrical installations.</li> <li>- Aisles between stacks of packed produce must be wide enough to provide access from three sides. The minimum width of aisles shall be 2,5 m.</li> <li>- The use of naked portable lamps shall not be permitted.</li> <li>- The use of any heat source shall be prohibited unless properly authorised, supervised and controlled. Smoking shall be prohibited at all times.</li> <li>- Welding or cutting work shall be carried out on surfaces previously cleaned of nitrate residues and sufficiently insulated from nitrate.</li> <li>- Water, sawdust and organic products must not be used to clean the warehouse floor.</li> <li>- Exposure of the fertiliser to sunlight must be avoided, even if it is packaged.</li> <li>- In no case shall the arrangement of the stored product obstruct normal or emergency exits, nor be an obstacle to access to safety equipment or areas.</li> <li>- Storerooms shall be adequately ventilated to avoid exceeding the maximum permissible concentrations of dust under working conditions.</li> <li>- In enclosures for the storage of ammonium nitrate fertilisers of high nitrogen content, no handling of the product shall be permitted except for loading and unloading or feeding to the packaging facilities.</li> <li>- The operator of the installation shall have a certificate or certified copy thereof, guaranteeing that the stored product has passed the detonability test laid down in order to exclude the possibility that the product is explosive grade.</li> <li>- The roof must have a light structure and wood or other combustible material must not be used.</li> <li>- Buildings for storage must be fitted with lightning arresters.</li> </ul>	
<b>7.3</b>	<b>Specific end use(s)</b>	
	Use only as described in section 1.2.	
<b>SECTION 8 Exposure controls/personal protection</b>		
<b>8.1</b>	<b>Control parameters</b>	
	<b>Occupational exposure limits</b>	There is no limit of occupational exposure value.
	<b>Recommended monitoring procedures</b>	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.

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<b>Derived effect levels</b>		No DELs available.				
<b>Predicted effect concentrations</b>		No PECs available.				
<b>Ingredients with limit values that require monitoring at the workplace</b>		Not required.				
<b>DNEL</b>						
<b>Substance</b>				6484-52-2		
				Ammonium nitrate		
<b>Industrial/Professional worker</b>	<b>Inhalation (mg/m<sup>3</sup>)</b>	<b>Long-term</b>	<b>Systemic</b>	36 mg/m <sup>3</sup>		
			<b>Local</b>	No hazard has been identified		
		<b>Short-term</b>	<b>Systemic</b>	Hazards are unknown but no further information is needed as no exposure to the substance is expected to occur		
			<b>Local</b>	Hazards are unknown but no further information is needed as no exposure to the substance is expected to occur		
		<b>Dermal (mg/kg pc/día)</b>	<b>Long-term</b>	<b>Systemic</b>	5,12 mg/kg bw/d	
				<b>Local</b>	No hazard has been identified	
			<b>Short-term</b>	<b>Systemic</b>	No hazard has been identified	
				<b>Local</b>	No hazard has been identified	
	<b>Ocular (mg/kg pc/día)</b>	<b>Long-term</b>	<b>Systemic</b>	Low risk (no threshold was derived)		
			<b>Local</b>	Low risk (no threshold was derived)		
		<b>Short-term</b>	<b>Systemic</b>	Low risk (no threshold was derived)		
			<b>Local</b>	Low risk (no threshold was derived)		
	<b>Inhalation (mg/m<sup>3</sup>)</b>	<b>Long-term</b>	<b>Systemic</b>	8,9 mg/m <sup>3</sup>		
			<b>Local</b>	No hazard has been identified		
			<b>Systemic</b>	No hazard has been identified		
			<b>Local</b>	No hazard has been identified		
<b>Dermal (mg/kg pc/day)</b>		<b>Long-term</b>	<b>Systemic</b>	2,56 mg/kg bw/d		
			<b>Local</b>	No hazard has been identified		
		<b>Short-term</b>	<b>Systemic</b>	No hazard has been identified		
			<b>Local</b>	No hazard has been identified		

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<b>Consumer</b>	<b>Oral (mg/kg pc/day)</b>	<b>Long-term</b>	<b>Local</b>	No hazard has been identified	
			<b>Systemic</b>	2,56 mg/kg bw/d	
		<b>Short-term</b>	<b>Local</b>	No hazard has been identified	
			<b>Systemic</b>	No hazard has been identified	
		<b>Ocular (mg/kg pc/day)</b>	<b>Long-term</b>	<b>Local</b>	No hazard has been identified
				<b>Systemic</b>	Not available
	<b>Short-term</b>		<b>Local</b>	Not available	
			<b>Systemic</b>	Low risk (no threshold was derived)	
	<b>PNEC</b>				
	<b>Substance</b>			6484-52-2	
				Ammonium nitrate	
	<b>Fresh water (mg/L)</b>			No hazard has been identified	
<b>Salt water (mg/L)</b>			No hazard has been identified		
<b>STP (mg/L)</b>			18 mg/L		
<b>Fresh water sediment (mg/L)</b>			No hazard has been identified		
<b>Salt water sediment (mg/L)</b>			No hazard has been identified		
<b>Air (mg/L)</b>			No hazard has been identified		
<b>Soil (mg/L)</b>			No hazard has been identified		
<b>Predators (secondary poisoning) (mg/L)</b>			The substance has no bioaccumulation potential		
<b>Components with biological limit values</b>		Non-existent.			
<b>Additional indications</b>		The Occupational exposure limits lists valid during the making were used as basis.			
<b>8.2</b>	<b>Exposure controls</b>				
	<b>Appropriate engineering controls</b>		<ul style="list-style-type: none"> <li>- Ensure adequate ventilation.</li> <li>- Apply technical measures to comply with professional exposure limits.</li> <li>- Consult the protective measures listed in sections 7 and 8.</li> </ul>		
	<b>General protection and hygiene measures</b>		<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>		



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<b>Personal protective measures, such as personal protective equipment</b>	<b>Respiratory protection</b>	Required when dusts are generated. Recommended Filter type: Filter P2 for solid and liquid particles of harmful substances.
	<b>Hand protection</b>	Wear suitable gloves (e.g. rubber or PVC) when handling the product for long periods of time.
	<b>Glove material</b>	Nitrile rubber, NBR
	<b>Other</b>	Use personal protective equipment during use and handling of the product.
	<b>Eye/face protection</b>	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. 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.
	<b>Thermal hazards</b>	Not available.
<b>Environmental exposure controls</b>	General ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.	
<b>SECTION 9</b>	<b>Physical and chemical properties</b>	
<b>9.1</b>	<b>Information on basic physical and chemical properties</b>	
	<b>Appearance</b>	Granulate
	<b>Colour</b>	White
	<b>Odour</b>	Odourless
	<b>Odour threshold</b>	Not determined
	<b>pH</b>	4.5(10%)
	<b>Melting point/freezing point</b>	170 ° C
	<b>Initial boiling point and boiling range</b>	210 ° C
	<b>Flash point</b>	Not applicable due to physico-chemical characteristics
	<b>Evaporation rate</b>	Not available
	<b>Flammability</b>	Contact with combustible material may cause fire.
	<b>Upper/lower flammability or explosive limits</b>	
	<b>Lower</b>	Not available.
	<b>Upper</b>	Not available.



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	<b>Organic peroxides</b>	Not applicable due to physico-chemical characteristics
	<b>Corrosive to metals</b>	Not applicable due to physico-chemical characteristics
	<b>Desensitised explosives</b>	Not applicable due to physico-chemical characteristics
	<b>Other safety characteristics</b>	
	<b>Mechanical sensitivity</b>	Not applicable due to physico-chemical characteristics
	<b>Self-accelerating polymerisation temperature</b>	Not applicable due to physico-chemical characteristics
	<b>Formation of explosible dust/air mixtures</b>	Not applicable due to physico-chemical characteristics
	<b>Acid/alkaline reserve</b>	Not applicable due to physico-chemical characteristics
	<b>Evaporation rate</b>	Not available
	<b>Miscibility</b>	Not available
	<b>Conductivity</b>	Not applicable due to physico-chemical characteristics
	<b>Corrosiveness</b>	Not applicable due to physico-chemical characteristics
	<b>Gas group</b>	Not applicable due to physico-chemical characteristics
	<b>Redox potential</b>	Not applicable due to physico-chemical characteristics
	<b>Radical formation potential</b>	Not applicable due to physico-chemical characteristics
	<b>Photocatalytic properties</b>	Not applicable due to physico-chemical characteristics
<b>SECTION 10</b>	<b>Stability and reactivity</b>	
<b>10.1</b>	<b>Reactivity</b>	Oxidizing.
<b>10.2</b>	<b>Chemical stability</b>	Sensitivity to light.
<b>10.3</b>	<b>Possibility of hazardous reactions</b>	<p>Risk of explosion with: Alkali metals, aluminium chloride, ammonia, ammonium compounds, barium nitrate, combustible substances, carbides, charcoal, chlorates, chlorites, 2,4 Dinitrotoluene, esters, urea, iron(III) compounds, potassium, potassium permanganate, hydrocarbons, copper compounds, nitro compounds, oils, perchlorates, powdered metals, powdered aluminium, reducing agents, rust, sodium, sodium hypochlorite, sulfur, wood/sawdust, sugars, organic substances, hypochlorous acid, organic nitro compounds.</p> <p>Aluminium, antimony, Bismuth, Lead, cadmium, chromium, Cobalt, Iron, Copper, magnesium, Manganese, Nickel, Zinc, Tin, Mild steel, in powder form.</p> <p>Risk of ignition or formation of inflammable gases or vapours with: potassium dichromate, nitrites, Metals, phosphorus Exothermic reaction with: metallic chlorides, salts of oxyhalogenic acids, sulphides, organic nitro compounds, oxidizing agents, alkalines, nonmetals, acids.</p>
<b>10.4</b>	<b>Conditions to avoid</b>	Strong heating (decomposition).
<b>10.5</b>	<b>Incompatible materials</b>	Metals, Mild steel. Reducing agents, powdered metals, strong acids, strong oxidizing agents.
<b>10.6</b>	<b>Hazardous decomposition products</b>	Hazardous decomposition products formed under fire conditions. - Nitrogen oxides (NO <sub>x</sub> ), ammonia and SO <sub>2</sub> .

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SECTION 11	Toxicological information					
11.1	Information on toxicological effects					
<b>Acute toxicity</b>						
<b>Component</b>	<b>CAS number</b>	<b>Method</b>	<b>Species</b>	<b>Route</b>	<b>Result</b>	
Ammonium nitrate	6484-52-2	Not specified	Rat Mouse	Oral Subcutaneous Intravenous	DL50 = 14,3-15 g/kg bw (Rat) 11,5-13 g/kg bw (Mouse) DL50 = 8,2-9,4 g/kg bw (Rat) 9,2-10,7 g/kg bw (Mouse) DL50 = 5,3-5,4 g/kg bw (Rat) 4,6-5,2 g/kg bw (Mouse)	
Based on available data, the classification criteria are not met.						
<b>Skin corrosion/irritation</b>						
<b>Component</b>	<b>CAS number</b>	<b>Method</b>	<b>Species</b>	<b>Route</b>	<b>Result</b>	
Ammonium nitrate	6484-52-2	OECD 404	Rabbit	Cutaneous	Non irritant	
Based on available data, the classification criteria are not met.						
<b>Serious eye damage/irritation</b>						
<b>Component</b>	<b>CAS number</b>	<b>Method</b>	<b>Species</b>	<b>Route</b>	<b>Result</b>	
Ammonium nitrate	6484-52-2	OECD 405	Rabbit	Ocular	Slightly irritant	
Causes serious eye irritation.						
<b>Respiratory or skin sensitisation</b>						
<b>Component</b>	<b>CAS number</b>	<b>Method</b>	<b>Species</b>	<b>Route</b>	<b>Result</b>	
Ammonium nitrate	6484-52-2	-	-	-	There are no available studies	
Based on available data, the classification criteria are not met.						
<b>Germ cell mutagenicity</b>						
<b>Component</b>	<b>CAS number</b>	<b>Method</b>	<b>Species</b>		<b>Result</b>	
Ammonium nitrate	6484-52-2	OECD 473 OECD 476	Bacteria Cromosomic aberration Mutation of mammal cells		Non mutagenic	
Based on available data, the classification criteria are not met.						
<b>Carcinogenicity</b>						
<b>Component</b>	<b>CAS number</b>	<b>Method</b>	<b>Species</b>	<b>Route</b>	<b>Result</b>	
Ammonium nitrate	6484-52-2	NCI - screening tests	Rat Mouse	Oral	There is no evidence that the substance is carcinogenic.	
Based on available data, the classification criteria are not met.						
<b>Reproductive toxicity</b>						
<b>Component</b>	<b>CAS number</b>	<b>Method</b>	<b>Species</b>	<b>Route</b>	<b>Result</b>	

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	Ammonium nitrate	6484-52-2	Not specified	Rat	Oral	Data conclusive but not sufficient for classification. -Effects on fertility : There are no effects on fertility . -Toxicity for the development: NOAEL > 1000 mg urea/kg bw/d. Exposure to urea is highly unlikely to have negative developmental effects.
Based on available data, the classification criteria are not met.						
<b>STOT- single exposure</b>						
	<b>Component</b>	<b>CAS number</b>	<b>Method</b>	<b>Species</b>	<b>Route</b>	<b>Result</b>
	Ammonium nitrate	6484-52-2	Not available	Not available	Not available	Not available
Based on available data, the classification criteria are not met.						
<b>STOT-repeated exposure</b>						
	<b>Component</b>	<b>CAS number</b>	<b>Method</b>	<b>Species</b>	<b>Route</b>	<b>Result</b>
	Ammonium nitrate	6484-52-2	Not specified	Rat Mouse	Oral	NOAEL: 2250 mg/kg bw/d (Rat) NOAEL: 6750 mg/kg bw/d (Mouse) It is concluded that urea has a very low chronic toxicity.
Based on available data, the classification criteria are not met.						
<b>Aspiration hazard</b>						
	<b>Component</b>	<b>CAS number</b>	<b>Result</b>			
	Ammonium nitrate	6484-52-2	No significant effects or critical hazards are known..			
Based on available data, the classification criteria are not met.						
<b>11.2</b>	<b>Information on other hazards</b>					
	<b>Endocrine disruptive properties</b>					
	None of the components are listed.					
	<b>Other information</b>					
	Not available					
<b>SECTION 12</b>	<b>Ecological information</b>					
<b>12.1</b>	<b>Toxicity</b>					
	<b>Aquatic toxicity</b>					
	<b>Component</b>	<b>N° CAS</b>		<b>Fish</b>	<b>Crustacea</b>	<b>Algae</b>
	Ammonium nitrate	6484-52-2	Short term	CL50 (48h): 447 mg/L (Cyprinus carpio)	Not necessary	CE50 (48h): 490 mg/L
			Long term	CE50 (7d): 555 mg/L	CE50: 1700 mg/l	NOEC/CE10: 1700 mg/L
	<b>Terrestrial toxicity</b>					
	<b>Component</b>	<b>N° CAS</b>	<b>Macro-organism</b>	<b>Micro-organism</b>	<b>Terrestrial plants</b>	<b>Other organisms</b>

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

	Ammonium nitrate	6484-52-2	Not available	Not available	Not available	-
<b>Microbiological activity in wastewater treatment plants</b>						
	<b>Component</b>	<b>N° CAS</b>	<b>Toxicity to aquatic micro-organisms</b>			
	Ammonium nitrate	6484-52-2	CE50: 1000 mg/l CE10/NOEC: 180 mg/l			
<b>12.2</b>	<b>Persistence and degradability</b>					
	<b>Component</b>	<b>N° CAS</b>	<b>Degradation</b>			
	Ammonium nitrate	6484-52-2	<b>Hydrolysis</b>	Hydrolysis is not seen. It is not necessary.		
			<b>Photolysis</b>	Not necessary		
			<b>Biodegradation</b>	Not necessary		
<b>12.3</b>	<b>Bioaccumulative potential</b>					
	<b>Component</b>	<b>N° CAS</b>	<b>Octanol-water partition coefficient (Kow)</b>	<b>Bioaccumulation factor (BFC)</b>	<b>Observations</b>	
	Ammonium nitrate	6484-52-2	Not applicable. Inorganic	-	-	
<b>12.4</b>	<b>Mobility in soil</b>					
	<b>Component</b>	<b>N° CAS</b>	<b>Result</b>			
	Ammonium nitrate	6484-52-2	Being an inorganic substance it has a low adsorption potential.			
<b>12.5</b>	<b>Results of PBT and vPvB assessment</b>					
	Not applicable.					
<b>12.6</b>	<b>Endocrine disrupting properties</b>					
	The product doesn't contain any endocrine disrupting properties.					
<b>12.7</b>	<b>Other adverse effects</b>					
	Significative effects or critical risks are not known.					

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

SECTION 13 Disposal considerations					
<b>13.1</b>	<b>Waste treatment methods</b>				
	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 (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	HP2: Oxidising HP4: Irritant - skin irritation and eye damage			
SECTION 14 Transport information					
	Regulatory information	ADR/RID	ADNR	IMDG	IATA
<b>14.1</b>	UN number	UN1942			
<b>14.2</b>	UN proper shipping name	UN1942 AMMONIUM NITRATE		AMMONIUM NITRATE	
<b>14.3</b>	Transport hazard class(es)				
	Class	5.1 (O2) Oxidising substances.		5.1 Oxidising substances.	
	Label	5,1		5,1	
<b>14.4</b>	Packing group	III			
<b>14.5</b>	Environmental hazards	Not applicable.			
	Special precautions for user	Not applicable.			
<b>14.6</b>		Hazard identification number (Kemler code): 50 EMS Number: F-H,S-Q Segregation groups: (SGG2) Ammonium compounds Stowage Category: C Stowage Code: SW1 Protected from sources of heat. SW14 Category A only if the special stowage provisions of 7.4.1.4 and 7.6.2.8.4 are complied with SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.			

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

<b>14.6</b>	<b>Segregation Code:</b>	SG16 Stow "separated from" class 4.1 SG42 Stow "separated from" SGG3-bromates. SG45 Stow "separated from" SGG4-chlorates. SG47 Stow "separated from" SGG5-chlorites. SG48 Stow "separated from" combustible material (particularly liquids). Combustible material does not include packing materials or dunnage. SG51 Stow "separated from" SGG8-hypochlorites SG56 Stow "separated from" SGG12-nitrites SG58 Stow "separated from" SGG13-perchlorates SG59 Stow "separated from" SGG14-permanganates SG61 Stow "separated from" SGG15-powdered metals		
<b>14.7</b>	<b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.		
	<b>Additional information</b>	Limited quantities (LQ) 5 kg Excepted quantities (EQ) Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g Transport category 3 Tunnel restriction code E	Limited quantities (LQ) 5 kg Excepted quantities (EQ) Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g UN "Model Regulation":** UN 1942 AMMONIUM NITRATE, 5.1, III	-
<b>SECTION 15</b>		<b>Regulatory information</b>		
<b>15.1</b>	<b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>			
	<b>Regulation (EC) No 1907/2006 (REACH)</b>	This product complies with the REACH Regulation.		
	<b>Named dangerous substances - ANNEX VI (CLP)</b>	None substance listed.		
	<b>SEVESO Category</b>	Not applicable.		
	<b>Qualifying quantity (tonnes) for the application of lower-tier requirements</b>	350 t		
	<b>Qualifying quantity (tonnes) for the application of upper-tier requirements</b>	2.500 t		



## Soluble ammonium nitrate with a nitrogen content $\geq$ 34% N

	<b>REGULATION (EU) 2019/1148</b>	
	<b>Annex I - Restricted Explosives Precursors (Upper limit value for licensing purposes under Article 5(3))</b>	CAS:6484-52-2 Ammonium Nitrate: Limit value: >45,7 %, Licensing isn't allowed ( $\geq$ 50- $\leq$ 100%)
	<b>Annex II - Reportable Explosives Precursors</b>	Doesn't contain the substance.
	<b>Regulation (EC) No 273/2004 on Drug Precursors</b>	Doesn't contain the substance.
	<b>Regulation (EC) No. 2009/1009</b>	This product complies with the Fertilizer's Regulation.
	<b>Regulation (EC) No. 1272/2008 (CLP)</b>	This product complies with the CLP Regulation.
	<b>Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.</b>	Not applicable.
	<b>Regulation (EC) No. 850/2004 on persistent organic pollutants and amending Directive 79/117/EEC</b>	Not applicable.
	<b>Regulation (EC) No 649/2012 concerning the export and import of dangerous chemicals.</b>	Not applicable.
	<b>Regulation (EC) No 111/2005 laying down rules for the monitoring of and trade in drug precursors between the Community and third countries.</b>	Doesn't contain the substance.
	<b>Regulation (EC) No 1907/2006 - ANNEX XVII</b>	Restriction N° 58
	<b>PBT/mPmB Evaluation</b>	Not applicable.
<b>15.2</b>	<b>Chemical safety assessment</b>	
	A chemical safety assessment has been carried out and exposure scenarios are attached to this data sheet.	
<b>SECTION 16</b>	<b>Other information</b>	
	<b>Relevant phrases</b>	H272 May intensify fire; oxidiser. H319 Causes serious eye irritation.

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

	<p><b>Abbreviations and acronyms</b></p>	<p>ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road).  STP: Sewage treatment plant.  OECD: Organisation for Economic Co-operation and Development.  NOAEL: No observed adverse effect level.  IMDG: International Maritime Code for Dangerous Goods.  IATA: International Air Transport Association.  GHS: Globally Harmonised System of Classification and Labelling of Chemicals.  CAS: Chemical Abstracts Service (division of the American Chemical Society).  DNEL: Derived No-Effect Level (REACH).  PNEC: Predicted No-Effect Concentration (REACH).</p>
	<p><b>Data compared to the previous version altered</b></p>	<p>It is the first version.</p>
	<p><b>References</b></p>	<p>This safety data sheet has been prepared in accordance with:</p> <ul style="list-style-type: none"> <li>- ANNEX II: Guidance for the preparation of Safety Data Sheets of Regulation (EC) No 1907/2006 (Regulation (EU) 2020/878) based on the data included in the chemical safety report of registered substances.</li> <li>- Guidance available on the European Chemicals Agency (ECHA) website: (<a href="http://echa.europa.eu/">http://echa.europa.eu/</a>).</li> <li>- Guidance for the compilation of safety data sheets for fertilizer materials (<a href="http://www.fertilizerseurope.com">www.fertilizerseurope.com</a>).</li> </ul>
	<p><b>Methods used for the classification of the mixture (Article 9 of Regulation (EC) No 1272/2008)</b></p>	<p>Classification and Labeling in accordance with the principle of extrapolation of Regulation No. 1272/2008 (CLP).</p>
	<p><b>Advice on any training appropriate for workers to ensure protection of human health and the environment</b></p>	<p>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.</p>

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.

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

### Exposure Scenarios



### Ammonium Nitrate

**ES 1:** Formulation - Formulation of chemicals and fertilizers

#### 1. Title section

ES name: *Formulation - Formulation of chemicals and fertilizers*

#### Environment

Formulation of chemicals and fertilizers	ERC 2; ERC 3
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#### Worker

Use in closed, continuous process with occasional controlled exposure	PROC 2
Use in closed batch process (synthesis or formulation)	PROC 3
Use in batch and other process (synthesis) where opportunity for exposure arises	PROC 4
Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)	PROC 5
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	PROC 8a
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	PROC 8b
Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	PROC 9
Treatment of articles by dipping and pouring	PROC 13
Production of preparations or articles by tableting, compression, extrusion, palletisation	PROC 14
Use as laboratory reagent	PROC 15

#### 2. Conditions of use affecting exposure

##### 2.1. Control of environmental exposure

Exposure assessment and risk characterization are not required for environment, in accordance with the ECHA Guidance on information requirements and chemical safety assessment, Part B: Hazard assessment, Version 2.1, December 2011

##### 2.2. Control of worker exposure

PROCs	2	3	4	5	8a/8b	9	13	14	15

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

### Product (Article) characteristics

Concentration of substance in mixture:	≤ 100% (solid)
Concentration of substance (used for exposure estimates):	Substance as such
Dustiness of material:	Low

### Amount used (or contained in articles), frequency and duration of use/exposure

Duration of activity:	< 8 hours
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### Technical and organisational conditions and measures

General ventilation:	Basic general ventilation (1-3 air changes per hour)			
Local exhaust ventilation:	no [Effectiveness Inhal: 0%]			
Containment:	Closed continuous process with occasional controlled exposure	Closed batch process with occasional controlled exposure	Semi-closed process with occasional controlled	No
Occupational Health and Safety Management System:	Advanced			

### Conditions and measures related to personal protection, hygiene and health evaluation

General:	Work under a high standard of personal hygiene. Wash hands and face before breaks. When using the product, do not eat, drink or smoke.
Dermal Protection:	Yes (long sleeved overall; chemically resistant gloves conforming to EN374 with basic employee training) [Effectiveness Dermal: 90%]
Respiratory Protection:	No [Effectiveness Inhal: 0%]
Eye Protection:	Yes (chemical goggles)

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

### Other conditions affecting workers exposure

Place of use:	Indoor					
Skin surface potentially exposed:	Two hands face (480 cm <sup>2</sup> )	One hand face only (240 cm <sup>2</sup> )	Two hands face (480 cm <sup>2</sup> )	Two hands (960 cm <sup>2</sup> )	Two hands face (480 cm <sup>2</sup> )	One hand face only (240 cm <sup>2</sup> )
Method	TRA Worker 3.0					

### 3. Exposure estimation and reference to its source

#### 3.1. Environmental release and exposure

Exposure assessment and risk characterization are not required for environment, in accordance with the ECHA Guidance on information requirements and chemical safety assessment, Part B: Hazard assessment, Version 2.1, December 2011

#### 3.2. Worker exposure

PROCs	2	3	4	5	8a/8b	9	13	14	15
<b>Route of exposure and type of effects</b>									
Inhalation, systemic, long term (mg/m <sup>3</sup> )	0,010	0,100	###	0,500	0,100	0,100	0,100	0,100	0,100
Dermal, systemic, long term (mg/kg bw/day)	0,137	0,069	###	1,371	1,371	0,686	1,371	0,343	0,034
Dermal, local, long-term	-	-	-	-	-	-	-	-	-
Eye, local	-	-	-	-	-	-	-	-	-
Combined routes, systemic, long-term	-	-	-	-	-	-	-	-	-
<b>RCR</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>8a/8b</b>	<b>9</b>	<b>13</b>	<b>14</b>	<b>15</b>
Inhalation, systemic, long term	< 0,01	<0,01	0	0,01	<0,01	<0,01	<0,01	<0,01	<0,01
Dermal, systemic, long term	0,027	0,013	0,1	0,27	0,268	0,134	0,268	0,067	<0,01
Dermal, local, long-term	Qualitative (see below)								
Eye, local	Qualitative (see below)								

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

Combined routes, systemic, long-term	0,027	0,016	###	0,282	0,271	0,137	0,271	0,070	<0,01
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### Conclusion on risk characterisation (qualitative)

#### Dermal, local, long-term

As a long sleeved overall and chemically resistant gloves are worn, the risk of causing local effects via long-term dermal exposure is considered to be controlled.

#### Eye, local

As eye protection is worn, the risk of causing ocular effects is considered to be controlled.

### 4. Guidance to DU to evaluate whether they work inside the boundaries set by the ES

In any of the exposure scenarios (ES) described above, the downstream user (DU) works within the limits established by ES if the operational conditions (OC) and risk management measures (RMM) described in the same are complied. When the conditions for the DU are not explicitly described in the general conditions of the ES, the DU must ensure that its specific CO and RMM comply with what is established in them. If the concentration of the substance in the mixture is not explicitly indicated in the ES, no restriction should be applied, that is, up to 100% of the substance may be used. Depending on the basis of the exposure assessment conducted for the ES, this can be done in different ways, as described in each of the environmental and occupational EEs.

Any deviation from the described conditions of use implies:

- (i) inform the SDS provider about deviations and request their inclusion in the ES, or
- (ii) develop an CSR (Chemical Safety Report) for DU (in accordance with article 37, paragraph 4), submit it to ECHA and keep it as its own documentation.

## Soluble ammonium nitrate with a nitrogen content $\geq$ 34% N

**ES 2:**

**Use at industrial site - Industrial use as intermediate incl. sampling, loading, filling, transfer, bagging, storage, quality control**

### 1. Title section

ES name: *Use at industrial site - Industrial use as intermediate incl. sampling, loading, filling, transfer, bagging, storage, quality control*

#### Environment

Industrial use as intermediate incl. sampling, loading, filling, transfer, bagging, storage, quality control	ERC 6a
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#### Worker

Use in closed process, no likelihood of exposure	PROC 1
Use in closed, continuous process with occasional controlled exposure	PROC 2
Use in closed batch process (synthesis or formulation)	PROC 3
Use in batch and other process (synthesis) where opportunity for exposure arises	PROC 4
Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)	PROC 5
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	PROC 8a
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	PROC 8b
Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	PROC 9
Treatment of articles by dipping and pouring	PROC 13
Production of preparations or articles by tableting, compression, extrusion, palletisation	PROC 14
Use as laboratory reagent	PROC 15

### 2. Conditions of use affecting exposure

#### 2.1. Control of environmental exposure

Exposure assessment and risk characterization are not required for environment, in accordance with the ECHA Guidance on information requirements and chemical safety assessment, Part B: Hazard assessment, Version 2.1, December 2011

#### 2.2. Control of worker exposure

PROCs	1	2	3	4/9	5	8a	8b	13/14	15
<b>Product (Article) characteristics</b>									
Concentration of substance in mixture:	$\leq$ 100% (solid)								

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

Concentration of substance (used for exposure estimates):	Substance as such						
Dustiness of material:	Low						
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>							
Duration of activity:	< 8 hours						
<b>Technical and organisational conditions and measures</b>							
General ventilation:	Basic general ventilation (1-3 air changes per hour)						
Local exhaust ventilation:	no [Effectiveness Inhal: 0%]						
Containment:	Closed system (minimal contact during routine operations)	Closed continuous process with occasional controlled exposure	Closed batch process with occasional controlled exposure	Semi-closed processes with occasional controlled exposure	No	Semi-closed process with occasional controlled exposure	No
Occupational Health and Safety Management System:	Advanced						
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>							
General:	Work under a high standard of personal hygiene. Wash hands and face before breaks. When using the product, do not eat, drink or smoke.						
Dermal Protection:	Yes (long sleeved overall; chemically resistant gloves conforming to EN374 with basic employee training) [Effectiveness Dermal: 90%]						
Respiratory Protection:	No [Effectiveness Inhal: 0%]						
Eye Protection:	Yes (chemical goggles)						
<b>Other conditions affecting workers exposure</b>							
Place of use:	Indoor						



## Soluble ammonium nitrate with a nitrogen content $\geq$ 34% N

Skin surface potentially exposed:	One hand face only (240 cm <sup>2</sup> )	Two hands face (480 cm <sup>2</sup> )	One hand face only (240 cm <sup>2</sup> )	Two hands face (480 cm <sup>2</sup> )	Two hands (960 cm <sup>2</sup> )	Two hands face (480 cm <sup>2</sup> )	One hand face only (240 cm <sup>2</sup> )
Method	TRA Worker 3.0						

### 3. Exposure estimation and reference to its source

#### 3.1. Environmental release and exposure

Exposure assessment and risk characterization are not required for environment, in accordance with the ECHA Guidance on information requirements and chemical safety assessment, Part B: Hazard assessment, Version 2.1, December 2011

#### 3.2. Worker exposure

PROCs	1	2	3	4	5/8a	8a	9	13/14	15
<b>Route of exposure and type of effects</b>									
Inhalation, systemic, long term (mg/m <sup>3</sup> )	0,010	0,010	###	0,500	0,500	0,100	0,100	0,100	0,100
Dermal, systemic, long term (mg/kg bw/day)	0,003	0,137	###	0,686	1,371	1,371	0,686	1,371 0,343	0,034
Dermal, local, long-term	-	-	-	-	-	-	-	-	-
Eye, local	-	-	-	-	-	-	-	-	-
Combined routes, systemic, long-term	-	-	-	-	-	-	-	-	-
<b>RCR</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4/9</b>	<b>5</b>	<b>8b</b>	<b>9</b>	<b>13/14</b>	<b>15</b>
Inhalation, systemic, long term	< 0,01	< 0,01	<0,01	0,01	0,014	<0,01	<0,01	<0,01	<0,01
Dermal, systemic, long term	< 0,01	0,027	0	0,13	0,268	0,268	0,134	0,268 0,067	<0,01
Dermal, local, long-term	Qualitative (see below)								
Eye, local	Qualitative (see below)								
Combined routes, systemic, long-term	< 0,01	0,027	###	0,148	0,282	0,282	0,137	0,271 0,07	<0,01

**Conclusion on risk characterisation (qualitative)**

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

### Dermal, local, long-term

As a long sleeved overall and chemically resistant gloves are worn, the risk of causing local effects via long-term dermal exposure is considered to be controlled.

### Eye, local

As eye protection is worn, the risk of causing ocular effects is considered to be controlled.

## 4. Guidance to DU to evaluate whether they work inside the boundaries set by the ES

In any of the exposure scenarios (ES) described above, the downstream user (DU) works within the limits established by ES if the operational conditions (OC) and risk management measures (RMM) described in the same are complied. When the conditions for the DU are not explicitly described in the general conditions of the ES, the DU must ensure that its specific CO and RMM comply with what is established in them. If the concentration of the substance in the mixture is not explicitly indicated in the ES, no restriction should be applied, that is, up to 100% of the substance may be used. Depending on the basis of the exposure assessment conducted for the ES, this can be done in different ways, as described in each of the environmental and occupational EEs.

Any deviation from the described conditions of use implies:

- (i) inform the SDS provider about deviations and request their inclusion in the ES, or
- (ii) develop an CSR (Chemical Safety Report) for DU (in accordance with article 37, paragraph 4), submit it to ECHA and keep it as its own documentation.

## Soluble ammonium nitrate with a nitrogen content $\geq$ 34% N

**ES 3:**

**Use at industrial site - Industrial use as reactive processing aid incl. sampling, loading, filling, transfer, bagging, storage, quality control**

### 1. Title section

ES name: *Use at industrial site - Industrial use as reactive processing aid incl. sampling, loading, filling, transfer, bagging, storage, quality control*

#### Environment

Industrial use as reactive processing aid incl. sampling, loading, filling, transfer, bagging, storage, quality control	ERC 6b
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#### Worker

Use in closed process, no likelihood of exposure	PROC 1
Use in closed, continuous process with occasional controlled exposure	PROC 2
Use in closed batch process (synthesis or formulation)	PROC 3
Use in batch and other process (synthesis) where opportunity for exposure arises	PROC 4
Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)	PROC 5
Industrial spraying	PROC 7
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	PROC 8a
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	PROC 8b
Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	PROC 9
Roller application or brushing	PROC 10
Treatment of articles by dipping and pouring	PROC 13
Use as laboratory reagent	PROC 15

### 2. Conditions of use affecting exposure

#### 2.1. Control of environmental exposure

Exposure assessment and risk characterization are not required for environment, in accordance with the ECHA Guidance on information requirements and chemical safety assessment, Part B: Hazard assessment, Version 2.1, December 2011

#### 2.2. Control of worker exposure

<b>PROCs</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4/9</b>	<b>5/13</b>	<b>8a/10</b>	<b>8b</b>	<b>7</b>	<b>15</b>
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#### Product (Article) characteristics

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

Concentration of substance in mixture:	$\leq 100\%$ (solid)						
Concentration of substance (used for exposure estimates):	Substance as such						
Dustiness of material:	Low						
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>							
Duration of activity:	$< 8$ hours						
<b>Technical and organisational conditions and measures</b>							
General ventilation:	Basic general ventilation (1-3 air changes per hour)						
Local exhaust ventilation:	no [Effectiveness Inhal: 0%]						
Containment:	Closed system (minimal contact during routine operations)	Closed continuous process with occasional controlled exposure	Closed batch process with occasional controlled	Semi-closed processes with occasional controlled exposure	No	Semi-closed processes with occasional controlled exposure	No
Occupational Health and Safety Management System:	Advanced						
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>							
General:	Work under a high standard of personal hygiene. Wash hands and face before breaks. When using the product, do not eat, drink or smoke.						
Dermal Protection:	Yes (long sleeved overall; chemically resistant gloves conforming to EN374 with basic employee training) [Effectiveness Dermal: 90%]						
Respiratory Protection:	No [Effectiveness Inhal: 0%]						
Eye Protection:	Yes (chemical goggles)						
<b>Other conditions affecting workers exposure</b>							

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

Place of use:	Indoor						
Skin surface potentially exposed:	One hand face only (240 cm <sup>2</sup> )	Two hands face (480 cm <sup>2</sup> )	One hand face only (240 cm <sup>2</sup> )	Two hands face (480 cm <sup>2</sup> )	Two hands (960 cm <sup>2</sup> )	Two hands and upper wrists (1500 cm <sup>2</sup> )	One hand face only (240 cm <sup>2</sup> )
Method	TRA Worker 3.0						

### 3. Exposure estimation and reference to its source

#### 3.1. Environmental release and exposure

Exposure assessment and risk characterization are not required for environment, in accordance with the ECHA Guidance on information requirements and chemical safety assessment, Part B: Hazard assessment, Version 2.1, December 2011

#### 3.2. Worker exposure

PROCs	1	2	3	4	5/8a/10	7	8b/13	9	15
<b>Route of exposure and type of effects</b>									
Inhalation, systemic, long term (mg/m <sup>3</sup> )	0,010	0,010	###	0,500	0,500	1,000	0,100	0,100	0,100
Dermal, systemic, long term (mg/kg bw/day)	0,003	0,137	###	0,686	1,371	4,286	1,371	0,686	0,034
Dermal, local, long-term	-	-	-	-	-	-	-	-	-
Eye, local	-	-	-	-	-	-	-	-	-
Combined routes, systemic, long-term	-	-	-	-	-	-	-	-	-
<b>RCR</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5/8a/10</b>	<b>7</b>	<b>8b/13</b>	<b>9</b>	<b>15</b>
Inhalation, systemic, long term	< 0,01	< 0,01	<0,01	0,01	0,014	0,028	<0,01	<0,01	<0,01
Dermal, systemic, long term	< 0,01	0,027	0	0,13	0,268	0,837	0,268	0,134	<0,01
Dermal, local, long-term	Qualitative (see below)								
Eye, local	Qualitative (see below)								
Combined routes, systemic, long-term	< 0,01	0,027	###	0,148	0,282	0,865	0,271	0,137	<0,01

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

### Conclusion on risk characterisation (qualitative)

#### Dermal, local, long-term

As a long sleeved overall and chemically resistant gloves are worn, the risk of causing local effects via long-term dermal exposure is considered to be controlled.

#### Eye, local

As eye protection is worn, the risk of causing ocular effects is considered to be controlled.

### 4. Guidance to DU to evaluate whether they work inside the boundaries set by the ES

In any of the exposure scenarios (ES) described above, the downstream user (DU) works within the limits established by ES if the operational conditions (OC) and risk management measures (RMM) described in the same are complied. When the conditions for the DU are not explicitly described in the general conditions of the ES, the DU must ensure that its specific CO and RMM comply with what is established in them. If the concentration of the substance in the mixture is not explicitly indicated in the ES, no restriction should be applied, that is, up to 100% of the substance may be used. Depending on the basis of the exposure assessment conducted for the ES, this can be done in different ways, as described in each of the environmental and occupational EEs.

Any deviation from the described conditions of use implies:

- (i) inform the SDS provider about deviations and request their inclusion in the ES, or
- (ii) develop an CSR (Chemical Safety Report) for DU (in accordance with article 37, paragraph 4), submit it to ECHA and keep it as its own documentation.

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

**ES 4:**

**Use by professional worker - Use by professional worker (outdoor and indoor of reactive substances in open systems)**

### 1. Title section

ES name: *Use by professional worker - Use by professional worker (outdoor and indoor of reactive substances in open systems)*

#### Environment

Use by professional worker (outdoor and indoor of reactive substances in open systems)	ERC 8e; ERC8b
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#### Worker

Use in closed process, no likelihood of exposure	PROC 1
Use in closed, continuous process with occasional controlled exposure	PROC 2
Use in closed batch process (synthesis or formulation)	PROC 3
Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)	PROC 5
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities	PROC 8a
Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities	PROC 8b
Transfer of substance or preparation into small containers (dedicated filling line, including weighing)	PROC 9
Non industrial spraying	PROC 11
Use as laboratory reagent	PROC 15
Hand-mixing with intimate contact and only PPE available	PROC 19

### 2. Conditions of use affecting exposure

#### 2.1. Control of environmental exposure

Exposure assessment and risk characterization are not required for environment, in accordance with the ECHA Guidance on information requirements and chemical safety assessment, Part B: Hazard assessment, Version 2.1, December 2011

#### 2.2. Control of worker exposure

PROCs	1	2	3	5	8a	8b	9	11	15	19
<b>Product (Article) characteristics</b>										
Concentration of substance in mixture:	$\leq 100\%$ (solid)									

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

Concentration of substance (used for exposure estimates):	Substance as such					
Dustiness of material:	Low					
<b>Amount used (or contained in articles), frequency and duration of use/exposure</b>						
Duration of activity:	< 8 hours					
<b>Technical and organisational conditions and measures</b>						
General ventilation:	Basic general ventilation (1-3 air changes per hour)					
Local exhaust ventilation:	no [Effectiveness Inhal: 0%]					
Containment:	Closed system (minimal contact during routine operations)	Closed continuous process with occasional controlled exposure	Closed batch process with occasional controlled exposure	No	Semi-closed process with occasional controlled exposure	No
Occupational Health and Safety Management System:	Advanced					
<b>Conditions and measures related to personal protection, hygiene and health evaluation</b>						
General:	Work under a high standard of personal hygiene. Wash hands and face before breaks. When using the product, do not eat, drink or smoke.					
Dermal Protection:	Yes (long sleeved overall; chemically resistant gloves conforming to EN374 with basic employee training) [Effectiveness Dermal: 90%]					
Respiratory Protection:	No [Effectiveness Inhal: 0%]					



## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

Eye Protection:	Yes (chemical goggles)								
<b>Other conditions affecting workers exposure</b>									
Place of use:	Indoor								
Skin surface potentially exposed:	One hand face only (240 cm <sup>2</sup> )	Two hands face (480 cm <sup>2</sup> )	One hand face only (240 cm <sup>2</sup> )	Two hands face (480 cm <sup>2</sup> )	Two hands (960 cm <sup>2</sup> )	Two hands face (480 cm <sup>2</sup> )	Two hands and upper wrists (1500 cm <sup>2</sup> )	One hand face only (240 cm <sup>2</sup> )	Two hands and forearms (1980 cm <sup>2</sup> )
Method	TRA Worker 3.0								

### 3. Exposure estimation and reference to its source

#### 3.1. Environmental release and exposure

Exposure assessment and risk characterization are not required for environment, in accordance with the ECHA Guidance on information requirements and chemical safety assessment, Part B: Hazard assessment, Version 2.1, December 2011

#### 3.2. Worker exposure

PROCs	1	2	3	5	8a	8b	9	11	15	19
<b>Route of exposure and type of effects</b>										
Inhalation, systemic, long term (mg/m <sup>3</sup> )	0,010	0,010	0,100	###	0,500	0,500	0,500	1,000	0,100	0,100
Dermal, systemic, long term (mg/kg bw/day)	0,003	0,137	0,069	###	1,371	1,371	0,686	4,284	0,034	2,829
Dermal, local, long-term	-	-	-	-	-	-	-	-	-	-
Eye, local	-	-	-	-	-	-	-	-	-	-

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

Combined routes, systemic, long-term	-	-	-	-	-	-	-	-	-	-
<b>RCR</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>8a</b>	<b>8b</b>	<b>9</b>	<b>11</b>	<b>15</b>	<b>19</b>
Inhalation, systemic, long term	< 0,01	< 0,01	<0,01	0	0,01	0,014	0,014	0,03	<0,01	<0,01
Dermal, systemic, long term	< 0,01	0,027	0,013	0,3	0,27	0,268	0,134	0,837	<0,01	0,552
Dermal, local, long-term	Qualitative (see below)									
Eye, local	Qualitative (see below)									
Combined routes, systemic, long-term	< 0,01	0,027	0,016	###	0,282	0,282	0,148	0,865	<0,01	0,555

### Conclusion on risk characterisation (qualitative)

#### Dermal, local, long-term

As a long sleeved overall and chemically resistant gloves are worn, the risk of causing local effects via long-term dermal exposure is considered to be controlled.

#### Eye, local

As eye protection is worn, the risk of causing ocular effects is considered to be controlled.

### 4. Guidance to DU to evaluate whether they work inside the boundaries set by the ES

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

In any of the exposure scenarios (ES) described above, the downstream user (DU) works within the limits established by ES if the operational conditions (OC) and risk management measures (RMM) described in the same are complied. When the conditions for the DU are not explicitly described in the general conditions of the ES, the DU must ensure that its specific CO and RMM comply with what is established in them. If the concentration of the substance in the mixture is not explicitly indicated in the ES, no restriction should be applied, that is, up to 100% of the substance may be used. Depending on the basis of the exposure assessment conducted for the ES, this can be done in different ways, as described in each of the environmental and occupational EEs.

Any deviation from the described conditions of use implies:

- (i) inform the SDS provider about deviations and request their inclusion in the ES, or
- (ii) develop an CSR (Chemical Safety Report) for DU (in accordance with article 37, paragraph 4), submit it to ECHA and keep it as its own documentation.

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

**ES 5:**

**Consumer Use - Consumer Use (outdoor and indoor of reactive substances in open systems) as part of specialist products, pyrotechnics and/or matches, fertilizer**

### 1. Title section

ES name: *Consumer Use - Consumer Use (outdoor and indoor of reactive substances in open systems) as part of specialist products, pyrotechnics and/or matches, fertilizer*

#### Environment

Consumer Use (outdoor and indoor of reactive substances in open systems) as part of specialist products, pyrotechnics and/or matches, fertilizer	ERC 8e; ERC 8b
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#### Consumer

Consumer Use (outdoor and indoor of reactive substances in open systems) as part of specialist products, pyrotechnics and/or matches	PC 1
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Consumer Use (outdoor and indoor) as part of fertilizer	PC 12
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### 2. Conditions of use affecting exposure

#### 2.1. Control of environmental exposure

Exposure assessment and risk characterization are not required for environment, in accordance with the ECHA Guidance on information requirements and chemical safety assessment, Part B: Hazard assessment, Version 2.1, December 2011

#### 2.2. Control of consumer exposure

PCs	1	12
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#### Product (Article) characteristics

Concentration of substance in mixture:	0.3 g/g (default)	0.46 g/g (max. allowed)
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#### Measures related to information and behavioural advice to consumers including personal protection and hygiene

Adult/Child assumed:	Adult
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Use frequency:	Infrequent
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Eye Protection:	Chemical goggles or safety glasses with side shields (when the concentration of the substance is $\geq 10\%$ )
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#### Other conditions affecting consumers exposure

## Soluble ammonium nitrate with a nitrogen content $\geq$ 34% N

Instructions:	Product labelling, showing that the product causes serious eye irritation (when the concentration of the substance is $\geq$ 10%)
Body parts potentially exposed:	Inside hands / one hand / palm of hands (428.8 cm <sup>2</sup> )
Dermal transfer factor:	1
Method	TRA Consumers 3.1

### 3. Exposure estimation and reference to its source

#### 3.1. Environmental release and exposure

Exposure assessment and risk characterization are not required for environment, in accordance with the ECHA Guidance on information requirements and chemical safety assessment, Part B: Hazard assessment, Version 2.1, December 2011

#### 3.2. Consumer exposure

PCs	1	12
<b>Route of exposure and type of effects</b>		
Dermal, systemic, long term (mg/kg bw/day)	0,858	1,315
Eye, local	-	-
Combined routes, systemic, long-term	-	-
<b>RCR</b>	<b>1</b>	<b>12</b>
Dermal, systemic, long term	0,335	0,514
Eye, local	Qualitative (see below)	
Combined routes, systemic, long-term	0,335	0,514

#### Conclusion on risk characterisation (qualitative)

**Eye, local**

## Soluble ammonium nitrate with a nitrogen content $\geq 34\%$ N

As chemical goggles or safety glasses with side shields are worn (when the concentration of the substance is 10% or more), the risk of the substance for causing ocular effects is considered to be controlled.

### 4. Guidance to DU to evaluate whether they work inside the boundaries set by the ES

In any of the exposure scenarios (ES) described above, the downstream user (DU) works within the limits established by ES if the operational conditions (OC) and risk management measures (RMM) described in the same are complied. When the conditions for the DU are not explicitly described in the general conditions of the ES, the DU must ensure that its specific CO and RMM comply with what is established in them. If the concentration of the substance in the mixture is not explicitly indicated in the ES, no restriction should be applied, that is, up to 100% of the substance may be used. Depending on the basis of the exposure assessment conducted for the ES, this can be done in different ways, as described in each of the environmental and occupational EEs.

Any deviation from the described conditions of use implies:

- (i) inform the SDS provider about deviations and request their inclusion in the ES, or
- (ii) develop an CSR (Chemical Safety Report) for DU (in accordance with article 37, paragraph 4), submit it to ECHA and keep it as its own documentation.