

#### In accordance with Regulation (EC) 1907/2006 (REACH), Annex II, amended by Regulation (EC) 2020/878

1. IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY/UNDERTAKING	
1.1 Product identifier	
Trade name:	Urea Ammonium Nitrate with Sulphur, solution (min 28% N+ min 5% S)
Other names:	Liquid fertilizer Urea Ammonium Nitrate with Sulphur.
	Solution UAN 28-0-0+S;
Chemical name:	Nitric acid Ammonium salt (1:1), mixture with Urea
INDEX number as listed in Table 3.1-Application VI in CLP:	Not listed. Mixture.
ID number of the C&L inventory:	Not classified. Mixture.
CAS number:	15978-77-5
EINECS number:	605-190-4
REACH registration no(s):	01-2119490981-27-0027: Ammonium nitrate
	01-2119463277-33-0014: Urea
	01-2119537325-41-0003: Ammonium Thiosulphate
UFI #	A600-S0Q7-R00J-4J57
1.2 Relevant identified uses of the mi	xture and uses advised against
Uses:	Uses by workers in industrial settings:
	1: Manufacturing of the substance, including handling, storage and quality control.
	2: Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at (non-)dedicated facilities. Industrial/professional settings.
	3: Storage.
	4: Transfer of substance into small containers (dedicated filling line, including weighing). Industrial/professional setting.
	5: Quality control.
	Uses by professional workers:
	6: Spraying.
	10: Professional use as fertilizer – liquid fertigation at open field (non industrial spraying).
	11: Professional use as fertilizer- liquid fertigation in the soil.
	12: Professional use as fertilizer – greenhouse liquid fertigation in the soil.
	16: Professional use as fertilizer – greenhouse liquid fertigation (non industrial spraying).
	Uses by consumers:



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		17: Consumer end use	<ul> <li>fertilization at open field.</li> </ul>
		18: Consumer end use	<ul> <li>indoor use of fertilizers.</li> </ul>
Uses advised against:		None	
1.3 Details of the sup	olier of the safet	ty data sheet	
Manufacturer:		AGROPOLYCHIM JSC BULGARIA Industrial zone 9160, DEVNYA Tel: +359 / 519 97 419 URL website: www.agropolychim.bg	
Person responsible for Sheet (with e-mail addr	the Safety Data ess)	Miroslava Tsvetkova, dipl. eng. AGROPOLYCHIM JSC, BULGARIA Industrial zone 9160, DEVNYA Tel.: +359 / 519 97 419, 553 Email: m tsvetkova@agropolychim.bg	
1.4 Emergency teleph	one number		
Emergency phone num company:	ber in the	Tel: + 359 / 519 97 530	(24 hours / day) on the production site
Emergency phone num – Toxicology Clinique "I Medical Institute:	none number in Bulgaria Clinique "Pirogov" Ite: +359 2 9154 233; +359 2 9154 409 (24 hours / day) Toxicolo Clinique, Pirogov National Institute, Sofia		2 9154 409 (24 hours / day) Toxicology nal Institute, Sofia
International emergence number	y phone	112	
2. HAZARDS IDENTIF	2. HAZARDS IDENTIFICATION		
2.1 Classification of the	he mixture		
Classification in accordance with Regulation 1272/2008 (CLP): based on a Chapter 3.3.3.3 / CLP classification rule, and according principle and limit values settled down into Table 3.3.3. This mixture is not included in Table 3.1 of CLP. According Orange book (Transport of Dangerous Goods) – mixtures, containing AN under 70% are not classified as a hazard and doesn't fall under class 5.1 i.e. oxidizing mixtures.			
Hazard H3 statement(s):	H319 – Serious eye irritation Causes serious eye irritation: Cat		Causes serious eye irritation: Cat.2
2.2 Label elements			
Labelling in accordance with Regulation 1272/2008 (CLP)			
Hazard pictogram(s):		GHS07	
Signal word		Warning	
Hazard H3	19	Cat.2 - Causes serious	eye irritation.



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statement(s):					
Precautionary statement(s):	P210 P220 P264 P280 P305+P351+P3	Keep a Keep/3 Wash Wear protec 338 IF IN E Remo rinsing	way from hea Store away fi hands thorou protective glo tion. EYES: Rinse ve contact le g.	t/ sparks/open flames/hot surfaces. – om clothing and combustible mat ughly after handling. oves/protective clothing/eye prote cautiously with water for several nses, if present and easy to do. C	– No smoking. terials. ction/face minutes. Continue
2.3 Other hazards					
PBT/vPvB criteria:		Accore and vF nitrate	According to Annex XIII of Regulation (EC) No 1907/2006, no PBT and vPvB assessment has been conducted since ammonium nitrate and urea are inorganic substances.		
Endocrine disruptin	g properties:	No ava	ailable data		
Nanoforms:		This p substa	This product does not contain nanoforms or nanoform-containing substances		m-containing
Other hazards:		Not kn	iown		
3. COMPOSITION	/INFORMATION	ON INGRI	EDIENTS		
Substances/prepa	ration:				
According to the RE Ammonium Thiosul	EACH Regulation hpate.	the produc	t is a mixture	between Urea, Ammonium nitrat	e and
Chemical name		CAS no.	EC no.	IUPAC name	% by weight
Nitric acid ammoniu	ım salt	6484-52-2	229-347-8	Ammonium nitrate, (NH4NO3)	14.00 ± 1
Carbonyl di amide		57-13-6	200-315-5	Urea, CO(NH <sub>2</sub> ) <sub>2</sub>	14.00 ± 1
Diaamonium salt of acid	Thiosulphate	7783-18-8	231-982-0	Ammonium Thiosulphate	11.00 ± 1
Water					Up to 100%
Ingredients Classi	fication:		•		
Ammonium Nitrate		Cat.3 - May Cat.2 - Ca	y intensify fire uses serious	e; oxidiser. eye irritation.	H272 H319
Urea		Not classifie	ed.		
Ammonium Thiosul	phate	Not classifie	ed		
4. FIRST-AID MEA	SURES				
4.1 Description of	first aid measu	res			



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Eye contact:	Immediately wash eyes with plenty of running water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses if present and easy to do. Seek medical advice if irritation develops and persists.
Skin contact:	Wash affected skin area with plenty of water and soap for at least 15 minutes thoroughly while removing contaminated clothing and shoes. Seek medical advice if irritation develops and persists
Ingestion:	Seek medical advice if the victim feels unwell. Wash out mouth with plenty of water and give plenty of water to drink. Do not induce vomiting. Never give anything by mouth to an unconscious person. Seek medical advice if symptoms occur.
Inhalation:	Remove the victim from exposure into fresh air immediately if adverse effects (e.g., dizziness, drowsiness, or respiratory irritation) occur. If not breathing, give artificial respiration or if breathing is difficult, give oxygen and seek medical advice. Do not use mouth-to-mouth respiration. Seek medical advice immediately when vapours are intensively inhaled.
4.2 Most important symptoms and eff	ects
Acute effects	Eye irritation
Delayed effects	Not known
4.3 Indication of any immediate medie	cal attention and special treatment needed
Note to physician: Methaemoglobinaem	a.
5. FIRE-FIGHTING MEASURES	
5.1 Extinguishing media	
Suitable:	Non-combustible. Water.
Not suitable:	Combustible material.
5.2 Special hazards arising from the substance or mixture	
May be explosive in contact with flammable or organic substances and at confinement during fire. In case of fire, may produce hazardous decomposition products such as nitrogen oxides (NO, NO2 etc.), ammonia (NH3), amines.	
5.3 Advice for firefighters	
No special measures required. In the event of fire, wear a self-contained breathing apparatus and a chemical protective suit.	
6. ACCIDENTAL RELEASE MEASURES	



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#### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid creating dusty conditions and prevent wind dispersal. Avoid contact with eyes, skin, and clothing. Use suitable protective equipment. Keep away from sources of ignition.

#### 6.2 Environmental precautions

Prevent the material from contact with soil, entering surface water or sanitary sewer system. Do not discharge directly to a water source. If accidental spillage or washings enter drains or watercourses contact local authority.

#### 6.3 Methods and material for containment and cleaning up

Vacuum or sweep up and place into suitable labelled containers for recovery or disposal. Clean up affected area with a large amount of water. Do not collect spilled material in sawdust or other combustible material. Prevent formation of dust clouds. Residual trace can be wiped away.

#### 6.4 Reference to other sections

See section 8 for personal protective equipment and section 13 for waste disposal.

#### 7. HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

Technical measures/ Precautions:	Use with adequate ventilation. Local exhaust ventilation should be provided. Avoid contact with eyes, skin and clothing. Avoid creating dusty conditions and prevent wind dispersal. Keep away from sources of ignition. Avoid contamination by any source including metals, dust and organic materials. Keep away from moisture.
General occupation hygiene:	Do not eat, drink or smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

#### 7.2 Conditions for safe storage, including any incompatibilities

Technical measures/ Storage conditions:	Keep in the original container. Keep container tightly closed in a cool, dry, well-ventilated place. Keep product away from heat, sparks, flame and other sources of ignition, out of direct sunlight and away from combustible and reducing materials and other incompatible materials.
	Packaging materials: Stainless steel (304). Synthetic material.
	Non suitable: Zinc, Copper
Incompatible products:	Combustible and reducing materials

#### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### 8.1 Control parameters

Regulated occupational exposure limit values:	No occupational exposure limits established.
Recommended occupational and	

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consumer exposure limit values	Exposure pattern	Derived No Effect L	evel (DNEL)
(following from the performed		Workers	
Ammonium nitrate CSA):	Oral <sup>1</sup>	Not applicable	Oral <sup>1</sup>
	Dermal <sup>1</sup>	5.12 mg/kg bw/day	Dermal <sup>1</sup>
		36 mg/m <sup>3</sup>	Inhalation <sup>1</sup>
	1: As an acute tox	icity bazard leading	to Classification and
	Labelling of the subst	tance has not been id	dentified, the long-term
	DNEL is considered exposure to the subst Guidance on inform assessment: Chap [concentration]-respor Hazard Assessment, Assessment, March 2	sufficient to ensure t ance do not occur (in nation requirements ter R.8: Charac nse for human health, Draft new chapter B 010).	hat effects from acute accordance with ECHA and chemical safety terization of dose May 2008 and Part B: .8 Scope of Exposure
8.2 Exposure controls			
Appropriate engineering controls:	None required: Use of	adequate ventilation	is good industrial
	practice. In addition, a	in eyewash facility and	a safety shower for
		izing this material is go	ou industrial practice.
Environmental exposure controls:	Dispose of rinse water regulations.	r in accordance with lo	ocal and national
Individual protection measures, such	as personal protectiv	e equipment	
Respiratory protection:	No (effectiveness inha	alation: 0%	
Hand protection:	long sleeved overall; o EN374 with basic emp	chemically resistant glo ployee training) [Effect	oves conforming to iveness Dermal: 90%]
Eye protection:	Chemical goggles or f	ace shield	
Skin and body protection:	Protective work clothe	es	
Hygiene measures:	Wash hands, forearms products, before eatin end of the working per to remove potentially clothing before reusing	s and face thoroughly g, smoking and using riod. Appropriate tech contaminated clothing g.	after handling chemical the lavatory and at the niques should be used . Wash contaminated
9. PHYSICAL AND CHEMICAL PROPERTIES			
9.1 Information on basic physical and	d chemical properties		
Appearance:	Clear liquid		
Odour:	Odourless		
Odour threshold:	Not applicable		
Melting/Freezing temperature:	Not applicable		
Boiling temperature:	~ 107 °C		
Flash-point:	Not applicable		
Flammability:	Not flammable (based	on molecular structur	e).



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Explosive properties:	Incompatible with strong reducing agents or other oxidisers. Possible incompatibility with finely powdered metals (cadmium, copper, lead, cobalt, nickel, bismuth, chromium, magnesium, zinc, sodium, potassium and aluminium). May explode by detonation, heat or shock when evaporated by near dryness. Solution may detonate if subjected to heat and pressure.
Oxidizing properties:	Slightly corrosive to zinc, copper and aluminium. Non corrosive to mid or stainless steal (304 or 316).
Vapour pressure:	17.2 mm Hg (20ºC) (solution)
Relative density (D4 (20)):	Not applicable
Solubility in water:	100%
Partition coefficient n-octanol/water:	Not relevant as the substance is inorganic, considered to be low (based on high water solubility)
Viscosity:	40°F: 6,1 cP; 60°F: 4,7 cP (32% N)
Specific conductivity:	Not applicable
Auto ignition temperature:	Not relevant (due to explosive properties)
pH (10% water solution)	6.7 – 7.5
Surface tension:	Not surface active (based on molecular structure)
	÷

#### 9.2 Other information

Taste: Disagreeable, saline. Volatility: 20% (w/w) Evaporation rate: Not available.

10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

Stable under recommended storage and handling conditions (see section 7, handling and storage).

Stable in normal temperatures and pressure.

#### 10.2 Chemical stability

Stable under recommended storage and handling conditions (see section 7, handling and storage).

#### 10.3 Possibility of hazardous reactions

When heated, decomposition products. UAN will form urea – nitrate when mixed with nitric acid at low pH. Urea – nitrate may become unstable and / or explosive under certain conditions.

#### 10.4 Conditions to avoid

Decomposes on heating. Confinement must be avoided. Avoid heat, flames, sparks and other sources of ignitions. Avoid contact with incompatible materials.

#### 10.5 Incompatible materials

Oxidizing materials, metal salts, metals, acids, basis, combustible materials.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. In



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case of fire, nitrogen oxides (NO, NO2).		
11. TOXICOLOGICAL INFORMATION		
11.1 Information on toxicological effe	ects	
ACUTE TOXICITY		
Acute oral toxicity:	LD <sub>50</sub> : 2000 mg/kg bw (OECD 401)	
Acute dermal toxicity:	LD <sub>50</sub> : > 5000 mg/kg bw (OECD 402)	
Acute inhalation toxicity:	LC <sub>50</sub> : > 88.8 mg/l (no guideline followed)	
LOCAL EFFECTS		
Skin irritation:	No adverse effect observed (not irritating)	
Eye irritation:	Adverse effect observed (irritating)	
Respiratory irritation:	No study available	
Corrosivity	No data available	
Sensitisation	No adverse effect observed (not sensitising)	
OTHER		
Repeated dose toxicity:	Via oral route - systemic effects: No adverse effect observed (NOAEL: 256 mg/kg bw/day) (subacute; rat) Dermal - systemic effects: No study available Dermal - local effects: No study available Inhalation - systemic effects: No adverse effect observed (NOAEC: 185 mg/m <sup>3</sup> ) (subacute; rat) Inhalation - local effects: No study available	
Mutagenicity:	In vitro: No adverse effect observed (negative)	
Reproductive toxicity:	No relevant information available	
Carcinogenicity:	Ammonium nitrate is not genotoxic	
12. ECOLOGICAL INFORMATION		
12.1 Toxicity		
Fish (acute):	LC <sub>50</sub> : > 100 mg/L	
Fish (long-term):	NOEC 58 mg/L (study on sodium nitrate)	
Aquatic invertebrates (acute):	> 100 mg/L	
Aquatic invertebrates (long-term):	No data	
Algae (acute):	EC <sub>50</sub> : > 100 mg/L	
Algae (long-term)	NOEC 100 mg/L	
12.2 Persistence and degradability	·	



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Biodegradation:	Standard test is not applicable as the substance is inorganic. In addition, in the anaerobic transformation of ammonium, one group of bacteria oxidizes ammonium to nitrite while another group oxidizes nitrite into nitrate. The average biodegradation rate in wastewater plant at 20°C is 52 g N/kg dissolved solid/day. Nitrate degradation is fastest in anaerobic conditions. In the anaerobic transformation of nitrate into N2, N2O and NH3, the biodegradation rate in wastewater plant at 20°C is 70 g N/kg dissolved solid/day.	
Hydrolysis:	No hydrolysable group is present, will completely dissociate into ions.	
12.3 Bioaccumulative potential		
Octanol-water partition coefficient (Kow):	Not relevant as the mixture is inorganic, but considered to be low (based on high water solubility)	
Bio concentration factor (BCF):	Low potential for bioaccumulation (based on ammonium nitrate substance properties).	
12.4 Mobility in soil		
Adsorption coefficient:	Low potential for adsorption (based on substance properties).	
According to Annex XIII of Regulation (E conducted since both components, amn	EC) No 1907/2006, no PBT and vPvB assessment has been nonium nitrate and urea are inorganic.	
12.6 Endocrine disrupting properties		
No available data for endocrine disrupti	ng properties.	
13. DISPOSAL CONSIDERATIONS		
Waste from residues:	In accordance with local and national regulations, disposed by landfill or incineration. Controlled biodegradation in waste water treatment is possible.	
Container:	Containers should be cleaned by appropriate method and then re-used or disposed by landfill or incineration as appropriate, in accordance with local and national regulations. Do not remove label until container is thoroughly cleaned.	
14. TRANSPORT INFORMATION		
UN Number:	ADR/RID: not available	
	ADN/ADNR: not available	
	IMDG: not available	
	ICAO/IATA: not available	
Proper shipping name:	Urea Ammonium nitrate, solution	
Transport hazard classes:	ADR/RID: no classification assign	
	ADN/ADNR: no classification assign	



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	IMDG: no classification assign	
	ICAO/IATA: no classification assign	
Packaging group:	ADR/RID: no classification assign	
	ADN/ADNR no classification assign	
	IMDG: no classification assign	
	ICAO/IATA no classification assign	
Label	Not applicable	
Special precautions:	Not applicable	
15. REGULATORY INFORMATION		
15.1 Safety, health and environmenta regulation/legislation specific for the substance or mixture:	Regulation EC 1907/2006 (REACH), EU Regulation on fertilizer products, Regulation CLP 1272/2008, Directive 2012/18/EU of the EP and EC of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC.	
15.2 Chemical safety assessment:	In accordance with REACH Article 14, a Chemical Safety Assessment has been carried out for the classified ingredients of this mixture – Ammonium nitrate.	
15.3 Regulation of 2019/1148 for amendment of Regulation EC №98/2013 on a marketing and use of explosive precursors harmonized rules across Europe	Classified component Ammonium Nitrate with Nitrogen conc. above 16% mass, connected to the AN is under the list of Appendix 1 with code 3102 30 10 (in a water solution) и 3102 30 90 (others). Substances under limitation according to this Regulation ARE NOT provided, introduced, owned or used by the general public!	
16. OTHER INFORMATION		
The information provided in this safety data sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any proceed, unless specified in the text.		
Classification in accordance with Regulation 1272/2008, as listed in Annex VI: None.		
Classification in accordance with Regulation 1272/2008, by self-classification based on the performed CSA:		
Causes serious eye irritation (H319), category 2.		
Version:	04	
Revision date:	April, 2022	
Previous revision date:	February, 2021	
Release info:	This extended version replaces all previous documents	



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Created/Revised by:	"AGROPOLYCHIM" JSC



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# **ANNEX (Ammonium Nitrate ingredient ES – ies)**

1 Exposure scenario (1) Manufacturing of the substance including h	andlir	ng, storage and quality controls
Use descriptors related to the life cycle stage	SU8/ PRO ERC	/9 IC1/2/3/8a/8b/9/14/15 1
Name of contributing environmental scenario (1) and corresponding ERC	1.	Manufacturing of substances (ERC1)
List of names of contributing worker scenarios (2) and corresponding PROC	1. 2.	Use in closed process, no likelihood of exposure (PROC1) Manufacturing in a closed continuous process, with occasional exposure (PROC2)
	3.	Use in closed batch process (synthesis or formulation) (PROC3)
	4.	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities (PROC8a)
	5.	Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities (PROC8b)
	6.	Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (PROC9)
	7.	Production of preparations* or articles by tabletting, compression, extrusion, pelletisation (PROC14)
	8.	Use as laboratory reagent (PROC15)
2.1 Contributing scenario (1) controlling en	vironn	nental exposure
2.1 Contributing scenario (1) controlling en Environmental release during manufacturing ERC1	vironn	nental exposure
2.1 Contributing scenario (1) controlling en Environmental release during manufacturing ERC1 An environmental assessment has not been per classified as dangerous for the environment.	vironn erforme	nental exposure ed as the substance does not meet the criteria for being
<ul> <li>2.1 Contributing scenario (1) controlling en</li> <li>Environmental release during manufacturing</li> <li>ERC1</li> <li>An environmental assessment has not been perclassified as dangerous for the environment.</li> <li>2.2 Contributing scenario (2) controlling work</li> <li>handling, storage and quality controls</li> </ul>	erforme orker e	nental exposure ed as the substance does not meet the criteria for being exposure for manufacturing of the substance including
<ul> <li>2.1 Contributing scenario (1) controlling en Environmental release during manufacturing ERC1 An environmental assessment has not been pe classified as dangerous for the environment.</li> <li>2.2 Contributing scenario (2) controlling wo handling, storage and quality controls</li> <li>All Process Categories are covered by this cor Management Measures (RMMs) are identical. PROC1/2/3/8a/8b/9/14/15</li> </ul>	vironn erforme orker e	ed as the substance does not meet the criteria for being exposure for manufacturing of the substance including ing scenario as all Operational Conditions (OCs) and Risk
<ul> <li>2.1 Contributing scenario (1) controlling en Environmental release during manufacturing ERC1 An environmental assessment has not been per classified as dangerous for the environment.</li> <li>2.2 Contributing scenario (2) controlling work handling, storage and quality controls</li> <li>All Process Categories are covered by this corr Management Measures (RMMs) are identical. PROC1/2/3/8a/8b/9/14/15</li> <li>Product characteristic</li> </ul>	vironn erforme orker e	ed as the substance does not meet the criteria for being <b>xposure for manufacturing of the substance including</b> ng scenario as all Operational Conditions (OCs) and Risk
<ul> <li>2.1 Contributing scenario (1) controlling en Environmental release during manufacturing ERC1</li> <li>An environmental assessment has not been per classified as dangerous for the environment.</li> <li>2.2 Contributing scenario (2) controlling work handling, storage and quality controls</li> <li>All Process Categories are covered by this cor Management Measures (RMMs) are identical. PROC1/2/3/8a/8b/9/14/15</li> <li>Product characteristic</li> <li>Product related conditions, e.g. the concentrat of the substance in a mixture, the physical stat that mixture (solid, liquid; if solid: level of dustiness), package design affecting exposure</li> </ul>	erforme orker e htributir ion e of	ed as the substance does not meet the criteria for being xposure for manufacturing of the substance including ng scenario as all Operational Conditions (OCs) and Risk Solid, low dustiness
<ul> <li>2.1 Contributing scenario (1) controlling en Environmental release during manufacturing ERC1 An environmental assessment has not been per classified as dangerous for the environment.</li> <li>2.2 Contributing scenario (2) controlling work handling, storage and quality controls</li> <li>All Process Categories are covered by this corr Management Measures (RMMs) are identical. PROC1/2/3/8a/8b/9/14/15</li> <li>Product characteristic</li> <li>Product related conditions, e.g. the concentrat of the substance in a mixture, the physical stat that mixture (solid, liquid; if solid: level of dustiness), package design affecting exposure</li> <li>Amounts used</li> </ul>	orker e ntributir e of	ed as the substance does not meet the criteria for being <b>exposure for manufacturing of the substance including</b> Ing scenario as all Operational Conditions (OCs) and Risk Solid, low dustiness
<ul> <li>2.1 Contributing scenario (1) controlling en Environmental release during manufacturing ERC1</li> <li>An environmental assessment has not been per classified as dangerous for the environment.</li> <li>2.2 Contributing scenario (2) controlling work handling, storage and quality controls</li> <li>All Process Categories are covered by this cort Management Measures (RMMs) are identical. PROC1/2/3/8a/8b/9/14/15</li> <li>Product characteristic</li> <li>Product related conditions, e.g. the concentrat of the substance in a mixture, the physical stat that mixture (solid, liquid; if solid: level of dustiness), package design affecting exposure</li> <li>Amounts used at a workplace (per task or per shift); note: sometimes this information is not needed for assessment of worker's exposure</li> </ul>	erforme orker e htributir e of	ed as the substance does not meet the criteria for being  xposure for manufacturing of the substance including  ng scenario as all Operational Conditions (OCs) and Risk  Solid, low dustiness Not applicable.
<ul> <li>2.1 Contributing scenario (1) controlling en Environmental release during manufacturing ERC1 An environmental assessment has not been per classified as dangerous for the environment.</li> <li>2.2 Contributing scenario (2) controlling work handling, storage and quality controls</li> <li>All Process Categories are covered by this cort Management Measures (RMMs) are identical. PROC1/2/3/8a/8b/9/14/15</li> <li>Product characteristic</li> <li>Product related conditions, e.g. the concentrat of the substance in a mixture, the physical stat that mixture (solid, liquid; if solid: level of dustiness), package design affecting exposure</li> <li>Amounts used at a workplace (per task or per shift); note: sometimes this information is not needed for assessment of worker's exposure</li> </ul>	erforme orker e ntributir e of	ed as the substance does not meet the criteria for being exposure for manufacturing of the substance including ng scenario as all Operational Conditions (OCs) and Risk Solid, low dustiness Not applicable.



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frequency (e.g. single events or repeated) of exposure		
Human factors not influenced by risk manageme	nt	
Particular conditions of use, e.g. body parts potentially exposed as a result of the nature of the activity	Not applicable	
Other given operational conditions affecting wor	kers exposure	
Other given operational conditions: e.g. technology or process techniques determining the initial release of substance from process into workers environment; room volume, whether the work is carried out outdoors/indoors, process conditions related to temperature and pressure.	Indoors	
Technical conditions and measures at process le	evel (source) to prevent release	
Process design aiming to prevent releases and hence exposure of workers; this in particular includes conditions ensuring rigorous containment; performance of containment to be specified (e.g. by quantification of residual losses or exposure)	Not applicable	
Technical conditions and measures to control dispersion from source towards the worker		
Engineering controls, e.g. exhaust ventilation, general ventilation; specify effectiveness of measure	<ol> <li>Containment as appropriate</li> <li>Good standard of general ventilation</li> </ol>	
Organizational measures to prevent /limit release	es, dispersion and exposure	
Specific organizational measures or measures needed to support the functioning of particular technical measures (e.g. training and supervision). Those measures need to be reported in particular for demonstrating strictly controlled conditions (to justify exposure based waiving).	Not applicable	
Conditions and measures related to personal pro	otection, hygiene and health evaluation	
Personal protection, e.g. wearing of gloves, face protection, full body dermal protection, goggles, respirator; specify effectiveness of measure; specify the suitable material for the PPE (where relevant) and advise how long the protective equipment can be used before replacement (if relevant)	1. Chemical goggles	
3 Exposure information and reference to its source		
Information for contributing scenario 1		
An environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environment.		
Information for contributing scenario 2		
A qualitative approach was used to conclude safe use for workers. The leading toxicological effect is eye irritation (local endpoint), for which no DNEL can be derived as no dose-response information is available. As minimal systemic effects were only noted at such high levels of substance that humans are normally not exposed to (see DNELs), a quantitative assessment is not considered necessary.		
4 Guidance to DU to evaluate whether he	works inside the boundaries set by the ES	



#### In accordance with Regulation (EC) 1907/2006 (REACH), Annex II, amended by Regulation (EC) 2020/878

## Urea - Ammonium nitrate + S

No additional risk management measures, besides those that are mentioned above, are needed to guarantee safe use for workers.

#### 5 Additional good practice advice beyond the REACH CSA

Additional good practices (Operational Conditions and Risk Management Measures) beyond the REACH Chemical Safety Assessment established within Chemical Industry are also advised and communicated through Safety Data Sheets. Such as:

- Containment as appropriate;
- Minimize number of staff exposed;
- Segregation of the emitting process;
- Effective contaminant extraction;
- Good standard of general ventilation;
- Minimization of manual phases;
- Avoidance of contact with contaminated tools and objects;
- Regular cleaning of equipment and work area;
- Management/supervision in place to check that RMMs in place are being used correctly and OCs followed;
- Training staff on good practice;
- Good standard of personal hygiene.



## Extended SAFETY DATA SHEET

# In accordance with Regulation (EC) 1907/2006 (REACH), Annex II, amended by Regulation (EC) 2020/878

1 Exposure scenario (2)		
Industrial use for formulation of preparations/articles, intermediate use and end-use in industrial settings.		
Use descriptors related to the life cycle stage	SU3/10	
	PC1/11/12/19/37	
	PROC1/2/3/5/8a/8b/9/13/15	
	ERC2/6a	
Name of contributing environmental scenario	1. Formulation of preparations (ERC2)	
	<ol> <li>Industrial use resulting in manufacture of another substance (use of intermediates) (ERC6a)</li> </ol>	
List of names of contributing worker	1. Use in closed process, no likelihood of exposure (PROC1)	
scenarios (2) and corresponding PROC	<ol> <li>Use in closed, continuous process with occasional controlled exposure (PROC2)</li> </ol>	
	<ol> <li>Use in closed batch process (synthesis or formulation) (PROC3)</li> </ol>	
	<ol> <li>Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) (PROC5)</li> </ol>	
	<ol> <li>Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities (PROC8a)</li> </ol>	
	<ol> <li>Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities (PROC8b)</li> </ol>	
	7. Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (PROC9)	
	<ol> <li>Treatment of articles by dipping and pouring (PROC13)</li> <li>Use as laboratory reagent (PROC15)</li> </ol>	
2.1. Contributing scenario (1) contri	alling environmental exposure	
Formulation of preparations (ERC2) and indust	rial use resulting in manufacture of another substance (use of	
An environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environment.		
2.2 Contributing scenario (2) controlling wor preparations/articles, intermediate use and	ker exposure for industrial use for formulation of end-use in industrial settings.	
All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures (RMMs) are identical. PROC1/2/3/5/8a/8b/9/13/15		
Product characteristic		
Product related conditions, e.g. the concentration of the substance in a mixture, the physical state of that mixture (solid, liquid; if solid: level of dustiness), package design affecting exposure	Solid, low dustiness Liquid	
Amounts used		
Amounts used at a workplace (per task or per shift); note: sometimes this information is not needed for assessment of worker's exposure	Not applicable	



#### In accordance with Regulation (EC) 1907/2006 (REACH), Annex II, amended by Regulation (EC) 2020/878

Frequency and duration of use/exposure	
Duration per task/activity (e.g. hours per shift) and frequency (e.g. single events or repeated) of exposure	More than 4 hours per day
Human factors not influenced by risk manage	ement
Particular conditions of use, e.g. body parts potentially exposed as a result of the nature of the activity	Not applicable
Other given operational conditions affecting workers exposure	
Other given operational conditions: e.g. technology or process techniques determining the initial release of substance from process into workers environment; room volume, whether the work is carried out outdoors/indoors, process conditions related to temperature and pressure.	Indoors
Technical conditions and measures at proce	ss level (source) to prevent release
Process design aiming to prevent releases and hence exposure of workers; this in particular includes conditions ensuring rigorous containment; performance of containment to be specified (e.g. by quantification of residual losses or exposure)	Not applicable
Technical conditions and measures to control	ol dispersion from source towards the worker
Engineering controls, e.g. exhaust ventilation, general ventilation; specify effectiveness of measure	<ol> <li>Containment as appropriate</li> <li>Good standard of general ventilation</li> </ol>
Organizational measures to prevent /limit rel	eases, dispersion and exposure
Specific organizational measures or measures needed to support the functioning of particular technical measures (e.g. training and supervision). Those measures need to be reported in particular for demonstrating strictly controlled conditions (to justify exposure based waiving).	Not applicable
Conditions and measures related to persona	protection, hygiene and health evaluation
Personal protection, e.g. wearing of gloves, face protection, full body dermal protection, goggles, respirator; specify effectiveness of measure; specify the suitable material for the PPE (where relevant) and advise how long the protective equipment can be used before replacement (if relevant)	1. Chemical goggles
3 Exposure information and reference to its	source
Information for contributing scenario 1	
An environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environment.	
Information for contributing scenario 2	
A gualitative approach was used to conclude safe use for workers.	



# In accordance with Regulation (EC) 1907/2006 (REACH), Annex II, amended by Regulation (EC) 2020/878

## Urea - Ammonium nitrate + S

The leading toxicological effect is eye irritation (local endpoint), for which no DNEL can be derived as no dose-response information is available. As minimal systemic effects were only noted at such high levels of substance that humans are normally not exposed to (see DNELs), a quantitative assessment is not considered necessary.

4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

No additional risk management measures, besides those that are mentioned above, are needed to guarantee safe use for workers.

#### 5 Additional good practice advice beyond the REACH CSA

Additional good practices (Operational Conditions and Risk Management Measures) beyond the REACH Chemical Safety Assessment established within Chemical Industry are also advised and communicated through Safety Data Sheets. Such as:

- Containment as appropriate;
- Minimize number of staff exposed;
- Segregation of the emitting process;
- Effective contaminant extraction;
- Good standard of general ventilation;
- Minimization of manual phases;
- Avoidance of contact with contaminated tools and objects;
- Regular cleaning of equipment and work area;
- Management/supervision in place to check that RMMs in place are being used correctly and OCs followed;
- Training staff on good practice;
- Good standard of personal hygiene;



# In accordance with Regulation (EC) 1907/2006 (REACH), Annex II, amended by Regulation (EC) 2020/878

1 Exposure scenario (3) Professional use in formulation of preparations and end-use		
Use descriptors related to the life cycle stage	SU22 PC12 PROC1/2/8a/8b/9/11/15/19 ERC8b/8e	
Name of contributing environmental scenario (1) and corresponding ERC	<ol> <li>Wide dispersive indoor use of reactive substances in open systems (ERC8b)</li> <li>Wide dispersive outdoor use of reactive substances in open systems (ERC8e)</li> </ol>	
List of names of contributing worker scenarios (2) and corresponding PROC	<ol> <li>Use in closed process, no likelihood of exposure (PROC1)</li> <li>Use in closed, continuous process with occasional controlled exposure (PROC2)</li> <li>Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities (PROC8a)</li> <li>Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities (PROC8b)</li> <li>Transfer of substance or preparation into small containers (dedicated facilities (PROC8b)</li> <li>Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (PROC9)</li> <li>Non industrial spraying (PROC11)</li> <li>Use as laboratory reagent (PROC15)</li> <li>Hand-mixing with intimate contact and only PPE available (PROC19)</li> </ol>	
2.1 Contributing scenario (1) controlling env	ironmental exposure	
Wide dispersive indoor use of reactive substances in open systems (ERC8b) and wide dispersive outdoor use or reactive substances in open systems (ERC8e). An environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environment.		
2.2 Contributing scenario (2) controlling wo preparations and end-use	rker exposure for professional use in formulation of	
All Process Categories are covered by this contr Management Measures (RMMs) are identical. PROC1/2/8a/8b/9/11/15/19	ibuting scenario as all Operational Conditions (OCs) and Risk	
Product characteristic		
Product related conditions, e.g. the concentration of the substance in a mixture, the physical state of that mixture (solid, liquid; if solid: level of dustiness), package design affecting exposure	Solid, low dustiness Liquid, >25% substance in the product	
Amounts used		
Amounts used at a workplace (per task or per shift); note: sometimes this information is not needed for assessment of worker's exposure	Not applicable	
Frequency and duration of use/exposure		
Duration per task/activity (e.g. hours per shift) and frequency (e.g. single events or repeated)	More than 4 hours per day	



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of exposure		
Human factors not influenced by risk management		
Particular conditions of use, e.g. body parts potentially exposed as a result of the nature of the activity	Not applicable	
Other given operational conditions affecting	workers exposure	
Other given operational conditions: e.g. technology or process techniques determining the initial release of substance from process into workers environment; room volume, whether the work is carried out outdoors/indoors, process conditions related to temperature and pressure.	Indoors or outdoors	
Technical conditions and measures at proces	ss level (source) to prevent release	
Process design aiming to prevent releases and hence exposure of workers; this in particular includes conditions ensuring rigorous containment; performance of containment to be specified (e.g. by quantification of residual losses or exposure)	Not applicable	
Technical conditions and measures to control	I dispersion from source towards the worker	
Engineering controls, e.g. exhaust ventilation, general ventilation; specify effectiveness of measure	<ol> <li>Containment as appropriate</li> <li>Good standard of general ventilation</li> <li>Avoid splashing. Use specific dispensers and pumps specifically designed to prevent splashes/spills/ exposure to occur</li> </ol>	
Organisational measures to prevent /limit rele	eases, dispersion and exposure	
Specific organisational measures or measures needed to support the functioning of particular technical measures (e.g. training and supervision). Those measures need to be reported in particular for demonstrating strictly controlled conditions (to justify exposure based waiving).	Not applicable.	
Conditions and measures related to personal	protection, hygiene and health evaluation	
Personal protection, e.g. wearing of gloves, face protection, full body dermal protection, goggles, respirator; specify effectiveness of measure; specify the suitable material for the PPE (where relevant) and advise how long the protective equipment can be used before replacement (if relevant)	1. Chemical goggles	
3 Exposure information and reference to its source		
Information for contributing scenario 1		
An environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environment.		
Information for contributing scenario 2		
A qualitative approach was used to conclude safe use for workers. The leading toxicological effect is eve irritation (local endpoint), for which no DNEL can be derived as no		



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dose-response information is available. As minimal systemic effects were only noted at such high levels of substance that humans are normally not exposed to (see DNELs), a quantitative assessment is not considered necessary.

4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

No additional risk management measures, besides those that are mentioned above, are needed to guarantee safe use for workers.

#### 5 Additional good practice advice beyond the REACH CSA

Additional good practices (Operational Conditions and Risk Management Measures) beyond the REACH Chemical Safety Assessment established within Chemical Industry are also advised and communicated through Safety Data Sheets. Such as:

- Containment as appropriate;
- Minimise number of staff exposed;
- Segregation of the emitting process;
- Effective contaminant extraction;
- Good standard of general ventilation;
- Minimisation of manual phases;
- Avoidance of contact with contaminated tools and objects;
- Regular cleaning of equipment and work area;
- Management/supervision in place to check that RMMs in place are being used correctly and OCs followed;
- Training staff on good practice;
- Good standard of personal hygiene;



#### In accordance with Regulation (EC) 1907/2006 (REACH), Annex II, amended by Regulation (EC) 2020/878

1 Exposure scenario (4)		
Consumer end-use of fertilizers and matches/fi	reworks	
Use descriptors related to the life cycle stage	SU21	
	PC11/12	
	ERC8b/8e/10a	
Name of contributing environmental scenario (1) and corresponding ERC	<ol> <li>Wide dispersive indoor use of reactive substances in open systems (ERC8b)</li> </ol>	
	<ol> <li>Wide dispersive outdoor use of reactive substances in open systems (ERC8e)</li> </ol>	
	<ol> <li>Wide dispersive outdoor use of long-life articles and materials with low release (ERC10a)</li> </ol>	
List of names of contributing consumer scenarios (2) and corresponding PC and sub-product	1. Explosives (PC11)	
categories if applicable		
2.1 Contributing scenario (1) controlling enviro	onmental exposure	
Wide dispersive indoor use of reactive substances reactive substances in open systems (ERC8e) and with low release (ERC10a).	in open systems (ERC8b), wide dispersive outdoor use of wide dispersive outdoor use of long-life articles and materials	
An environmental assessment has not been perfor classified as dangerous for the environment.	med as the substance does not meet the criteria for being	
2.2 Contributing scenario (2) consumer end-u	se of fertilizers and matches/fireworks	
All Product Categories are covered by this contribut Management Measures (RMMs) are identical. Exp use of fertilizers (PC12). No exposure is expected	ting scenario as all Operational Conditions (OCs) and Risk osure to eye irritating dilutions can occur during consumer from the use of matches/fireworks (PC11).	
Product characteristic		
Product related conditions, e.g. the concentration of the substance in a mixture, the physical state of	Solid, low dustiness	
that mixture (solid, liquid; if solid: level of dustiness), package design affecting exposure	Products containing ≥10% and <10%.	
Amounts used		
Amounts used per event	Not applicable	
Frequency and duration of use/exposure		
Duration of exposure per event and frequency of events; please note: Tier 1 exposure assessment usually refers to external event exposure, without taking into account the duration and frequency of the event (see Guidance Chapter R.15);	Not applicable	
Human factors not influenced by risk management		
Particular conditions of use, e.g. body parts potentially exposed; population potentially exposed (adults, children)	Not applicable	
Other given operational conditions affecting we	orkers exposure	
Other operational conditions e.g. room volume, air exchange rate, outdoor or indoor use	Indoors or outdoors	
Conditions and measures related to information	n and behavioral advice to consumers	
Safety advice to be communicated to consumers	Avoid splashing	



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in order to control exposure, e.g. technical instruction, behavioral advice;	
Conditions and measures related to personal pr	otection and hygiene
Personal protection, e.g. wearing of gloves, face protection, full body dermal protection, goggles, respirator; specify effectiveness of measure; specify the suitable material for the PPE (where relevant) and advise how long the protective equipment can be used before replacement (if relevant).	<ol> <li>If ≥10% of ammonium nitrate: Use chemical goggles</li> <li>If &lt;10% of ammonium nitrate: no personal protection needed</li> <li>Instructions addressed to the consumer via product labeling</li> </ol>
3 Exposure information and reference to	its source
Information for contributing scenario 1	
An environmental assessment has not been perform classified as dangerous for the environment.	ned as the substance does not meet the criteria for being
Information for contributing scenario 2	
A qualitative approach was used to conclude safe use for consumers. The leading toxicological effect is eye irritation (local endpoint), for which no DNEL can be derived as no dose-response information is available. As minimal systemic effects were only noted at such high levels of substance that humans are normally not exposed to (see DNELs), a quantitative assessment is not considered necessary.	
4 Guidance to DU to evaluate whether he work	s inside the boundaries set by the ES
No additional risk management measures, besides safe use for workers/consumers for use of fertilizers If ≥10% ammonium nitrate: Use chemical goggles	those that are mentioned above, are needed to guarantee s:

If <10% ammonium nitrate: No personal protection needed