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SAFETY DATA SHEET (according to Regulation (EC) No 1907/2006 (REACH), ANNEX II)

## AMMONIUM NITRATE Revision date: 01.05.2020 Version 4.2

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY			
1.1 Product identifier			
Trade name:	Ammonium Nitrate		
Other names:	Ammonium Nitrate Based Fertilizer		
Name IUPAC/ international chemical			
name:	Nitric Acid Ammonium Salt		
INDEX number and name as listed in Annex VI of CLP:	Not listed		
CAS number:	6484-52-2		
REACH registration No.:	01-2119490981-27-0042		
Molecular formula:	H3N.HNO3		
1.2 Relevant identified uses of the subst	ance or mixture and uses advised against		
Relevant identified uses:	<ol> <li>Manufacturing of the substance, including handling, storage and quality control. (see ES 1)</li> <li>Sampling, loading, filling, transfer, dumping, bagging of substance (charging/discharging) at (non-)dedicated facilities. Industrial/professional settings. (see ES 1)</li> <li>Storage (see ES 1)</li> <li>Transfer of substance into small containers (dedicated filling line, including weighing). Industrial/professional setting. (see ES 1)</li> <li>Quality control (see ES 1)</li> <li>Use of ammonium nitrate in the manufacturing of formulations for adhesives and sealants, explosives, fertilizers and water treatment chemicals. (see ES 2)</li> <li>Treating or coating of seed with fertilizer containing ammonium nitrate. (see ES 2)</li> <li>Use of ammonium nitrate as an intermediate to synthesize other substances. (see ES 2)</li> <li>Spraying. (see ES 3)</li> <li>Professional use of fertilizers containing ammonium nitrate – liquid fertigation at open field (non industrial spraying). (see ES 3)</li> <li>Professional use of fertilizers containing ammonium nitrate – liquid fertigation in the soil. (see ES 3)</li> <li>Professional use of fertilizers containing ammonium nitrate – liquid fertigation in the soil. (see ES 3)</li> <li>Professional use of fertilizers containing ammonium nitrate – liquid fertigation in the soil. (see ES 3)</li> <li>Professional use of fertilizers containing ammonium nitrate – greenhouse liquid fertigation in the soil. (see ES 3)</li> <li>Professional use of fertilizers containing ammonium nitrate – greenhouse liquid fertigation in the soil. (see ES 3)</li> <li>Professional use of fertilizers containing ammonium nitrate – greenhouse liquid fertigation in the soil. (see ES 3)</li> <li>Professional use of fertilizers containing ammonium nitrate – greenhouse liquid fertigation in the soil. (see ES 3)</li> <li>Professional use of fertilizers containing ammonium nitrate – greenhouse liquid fertigation in the soil. (see ES 3)</li></ol>		
	19: Consumer end use – matches and fireworks. (see ES 4)		
Uses advised against:	Cellulose wadding insulation materials		
1.3 Details of the supplier of the safety d	ata sheet		
Only Representative:	USICHEM GERMANY GMDH         Erdmannstr. 10         222765 Hamburg, Germany         Phone: +49 40 5300 300         Fax: +49 40 5300 30 33         www.ostchem.com         E-mail:         Irene.Nasdala@ebicon.de		
Manufacturer:	PrJSC "AZOT" 72, Heroiv Kholodnoho Yaru Str., Cherkasy, Ukraine Tel.: +38 0472 39-63-03 +38 0472 39-23-33 URL website: http://www.azot.ck.ua Email: let@azot.ck.ua sale@azot.ck.ua		
E-mail address of the competent person responsible for this Safety Data Sheet	PrJSC "AZOT" REACH Department onr@azot.ck.ua		
National contact:	Not available		



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1.4 Emergency telephone number			
	Tel: + 49 405 300 300		
	Opening hours: 9-18 (CET)		
Emergency phone number:	Tel: + 38 (0472) 39 61 17	English, Russian	
	Opening hours: 0-24		
	Languages of the phone service: Russian,	Ukrainian	
	SECTION 2: HAZARDS IDENTIFICATION	l i i i i i i i i i i i i i i i i i i i	
2.1 Classification of the substance			
Classification in accordance with Regulatio	n 1272/2008 (CLP)		
Hazard statement(s):	H272 H319	Cat.3 - May intensity fire; oxidiser. Cat.2 - Causes serious eye irritation.	
2.2 Label elements			
Labelling in accordance with Regulation 12	72/2008 (CLP)		
Hazard pictogram(s):			
Signal word	Warning		
Hazard statement(s):	H272 May intensify fire; oxidiser H319 Causes serious eye irritation		
Precautionary Statements (Prevention):	P210 Keep away from heat, hot surfaces,	sparks, open flames and other ignition	
	P220 Keep away from clothing and other c	combustible materials	
	P264 Wash hands thoroughly after handlin	9	
	P280 Wear protective gloves, protective cl	othing, eye protection, face protection	
Precautionary Statements (Response):	P370+P378 In case of fire: Use water to ex P305+P351+P338 IF IN EVES: Pipe caut	ktinguish	
	contact lenses, if present and easy to do.	Continue rinsing	
2.3 Other hazards		<u> </u>	
PBT/vPvB criteria:	According to Annex XIII of Regulation (EC) No 1907/2006, no PBT and vPvB assessment has been conducted since ammonium nitrate is inorganic.		
Other hazards:	None known		
SECTION	<b>13: COMPOSITION/INFORMATION ON INC</b>	GREDIENTS	
3.1 Substances			
According to the REACH Regulation the pro-	oduct is a mono-constituent		
Name	INDEX No. as listed in Annex VI of CLP	Weight % content (or range)	
Ammonium nitrate	Not listed	Not less than 97 % (w/w)	
Note: This substance is treated with organi	c substances (anti-caking agent).		
	SECTION 4: FIRST-AID MEASURES		
4.1 Description of first aid measures			
General notes:	Avoid breathing vapor or dust. Use adequa clothes. Wash thoroughly after handling. K In case of accident or if you feel unwell, so	te ventilation. Avoid contact with eyes, skin or eep closed. eek medical advice IMMEDIATELY (show the	
	product label/this eSDS where possible)	ing water for at least 15 minutes, eccasionally	
Following eye contact:	lifting the upper and lower eyelids. Remo	ve contact lenses if present and easy to do.	
	Seek medical advice if irritation develops a	nd persists.	
Following skin contact:	while removing contaminated clothing a	nd shoes. Seek medical advice if irritation	
	develops and persists.		
Following indestion:	Seek medical advice if the victim feels unv give plenty of water to drink. Do not induce	vell. Wash out mouth with plenty of water and	
	unconscious person. Seek medical advice	if symptoms occur.	
	Remove the victim from exposure into f	resh air immediately if adverse effects (e.g.	
Following inhalation:	respiration or if breathing is difficult, give	oxygen and seek medical advice. Do not use	
	mouth-to-mouth respiration. Seek medical advice immediately when vapors are		



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	intensively inhaled.		
Self-protection for the first aider:	None		
4.2 Most important symptoms and effects, both acute and delayed			
Acute effects Eye irritation			
Delayed effects	None known		
<b>4.3 Indication of any immediate medical</b> Note to physician: Methaemoglobinaemia.	attention and special treatment needed		
	SECTION 5: FIRE-FIGHTING MEASURES		
5.1 Extinguishing media			
Suitable extinguishing media:	Non-combustible. Water.		
Not suitable extinguishing media:	Combustible material.		
5.2 Special hazards arising from the sub- May be explosive in contact with flammat hazardous decomposition products such as	stance or mixture ble or organic substances and at confinement during fire. In case of fire, may produce nitrogen oxides (NO, NO <sub>2</sub> etc.), ammonia (NH <sub>3</sub> ), 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.		
SE	CTION 6: ACCIDENTAL RELEASE MEASURES		
6.1 Personal precautions, protective equ	ipment and emergency procedures		
6.1.1 For non-emergency personnel			
Emergency procedures: Avoid creating dus suitable protective equipment. Keep away f	ty conditions and prevent wind dispersal. Avoid contact with eyes, skin, and clothing. Use rom sources of ignition.		
Wear suitable protective clothing, including	respiratory protection. Portable showers and eyewash may also be needed.		
6.2 Environmental precautions Prevent the material from contact with soil source. If accidental spillage or washings e	, entering surface water or sanitary sewer system. Do not discharge directly to a water nter drains or watercourses contact local authority.		
<ul> <li>6.3.1 For containment:</li> <li>6.3.2 For cleaning up:</li> <li>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.</li> <li>6.3.3 Other information:</li> </ul>			
6.4 Reference to other sections	ment and eastion 40 fer waste dispessel		
See section 8 for personal protective equip	SECTION 7: HANDLING AND STORAGE		
7.1 Precautions for safe handling			
Protective measures:	Avoid contact with eves, skin and clothing		
Measures to prevent fire:	Keen away from sources of ignition		
Measures to prevent aerosol and dust			
generation:	Use with adequate ventilation. Local exhaust ventilation should be provided.		
Measures to protect the environment:	Avoid creating dusty conditions and prevent wind dispersal.		
Advice on general occupational hygiene: Advice on general occupational hygiene: Do not eat, drink or smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.			
7.2 Conditions for safe storage, includin	g any incompatibilities		
Technical measures/ Storage conditions: Avoid contamination by any source including metals, dust and organic materials. Kee away from moisture. Keep in the original container. Keep container tightly closed in cool, dry, well-ventilated place. Keep product away from heat, sparks, flame and ot sources of ignition, out of direct sunlight and away from combustible and reduct materials and other incompatible materials. Non suitable packaging materials: Zinc, Copper			
Packing materials:	Polypropylene, polyethylene		
Requirements for storage rooms and vessels:			



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Storage class:	5.1 C		
Further information on storage conditions:	None		
Incompatible products:	Combustible and reducing materials (strong acids and bases, metal powders, chromates, zinc, copper and copper alloys, chlorates, etc.)		
7.3 Specific end use(s):	None		
SECTION 8	: EXPOSURE CONTROLS / PI	ERSONAL PROTECTION	
8.1 Control parameters			
8.1.1 National occupational exposure limit v	alues: Not available		
8.1.2 National biological limit values: Not av	railable		
8.1.3 PNEC (Predicted No Effect Concentra	ation):		
Environmental protection target	PNEC		
Aqua – freshwater	0.45 mg/L		
Aqua - marine water	0.045 mg/L		
Aqua – intermittent releases	4.5 mg/L		
Sediment	No hazard identified		
Soil	No bazard identified		
Sewage treatment plant	18 mg/l		
Food chain: oral (secondary poisoning)			
Air	No bazard identified		
	Pouto	Derived No Eff	ect Level (DNEL)
	Noute	Workers	General population
		Not applicable	12.8 mg/kg bw/d
	Inhalation <sup>1</sup>	37.6 mg/m <sup>3</sup>	12.0  mg/kg bw/day 11.1 mg/m <sup>3</sup>
8.1.4 DNEL:	1		
	*: As an acute toxicity hazard leading to Classification and Labeling of the substance has not been identified, the long-term DNEL is considered sufficient to ensure that effects from acute exposure to the substance do not occur (in accordance with ECHA Guidance on information requirements and chemical safety assessment: Chapter R.8: Characterisation of dose [concentration]-response for human health, May 2008 and Part B: Hazard Accossment Draft new chapter R.8 Segme of Exposure Accossment March 2010)		
8.1.5 Monitoring procedures: Not available			
8.2 Exposure controls			
8.2.1 Appropriate engineering controls:			
Substance/mixture related measures to prevent exposure during identified uses: None required			
Technical measures to prevent exposure: Use of adequate ventilation is good industrial practice. In addition, an eyewash facility and a safety shower for facilities storing or utilizing this material is good industrial practice.			dition, an eyewash facility and a
8.2.2 Personal protection equipment:			
8.2.2.1 Respiratory protection:	Respiratory equipment		
8.2.2.2 Skin protection: Hand protection:	Protective (heat resistant) gloves		
Other skin protection:	Working clothes		
8.2.2.3 Eve and face protection:	Chemical goggles or face shield		
8.2.3 Environmental exposure controls:	Dispose of rinse water in accordance with local and national regulations		
SECT	ION 9: PHYSICAL AND CHEM		
9 1 Information on basic physical and chemical properties			
Appearance:	Transparent/white deliquescer	nt crystals (orthorhombic a	t room temperature) or white
Odour	granules.		
Odour throshold:			
	4,5 – 7,0 100g/l at 20°C		
Melting point/Freezing point:	169.6 – 169.7℃ (from peer-re	viewed handbook)	



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Initial boiling point and	d boiling range:	No boiling point			
Flash-point:		Not relevant, as the substance is an inorganic solid.			
Evaporation rate:		Not available			
Flammability (solid, g	as):	Non-flammable (based on molecula	ar structure).		
Upper/lower flammab limits:	ility or explosive	Not applicable			
Vapour pressure:		Considered negligible (based on m	elting and bo	iling point).	
Vapour density:		Negligible			
Relative density (D4 (	20)):	1.72 (from peer-reviewed handboo	k)		
Solubility in water:		>100 g/l at 20°C (from peer-reviewe	ed handbook)	)	
Oxidizing properties:		For transport ammonium nitrate fer substances. Transport classification	rtilisers (UN20 n: Class 5.1;	)67) are cons PG III.	idered oxidizing
Partition coefficient n	-octanol/water:	Not relevant as the substance is in solubility)	organic, cons	idered to be	low (based on high water
Auto ignition tempera	ture:	No auto-ignition (based on structur	e and melting	point): <0.2	% combustible material
Decomposition tempe	erature:	> 210°C			
Viscosity:		Not applicable to solids			
Explosive properties:		Ammonium nitrate fertilizers falling either.	g under UN	2067 do not	have explosive properties
9.2 Other information	n				
		SECTION 10: STABILITY AND REA	ACTIVITY		
10.1 Reactivity Stable under recomm 10.2 Chemical stabi	nended storage and ha	andling conditions (see section 7, ha	ndling and sto	orage).	
Stable under recomm	nended storage and ha	andling conditions (see section 7, hai	ndling and sto	orage).	
10.3 Possibility of h When heated, decom	azardous reactions				
10.4 Conditions to a Decomposes on heat	ting. Confinement mus	t be avoided.			
10.5 Incompatible n	10.5 Incompatible materials				
Reducing agents, strong acids and bases, metal powders, combustible materials, chromates, zinc, copper and copper alloys chlorates.			copper and copper alloys,		
10.6 Hazardous dec Under normal condit	omposition products ions of storage and us	se, hazardous decomposition produ	icts should no	ot be produce	ed. In case of fire, nitrogen
11.1 Information on toxicological effects					
11.1.1 Acute toxicity	g				
	Species	Mathad	Effective	Exposure	Deculto
Roule of exposure	Species		dose	time	Results
Oral	rat (Wistar) male/female	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)	-	-	LD <sub>50</sub> : 2950 mg/kg bw
Dermal	rat (Sprague-Dawley rat, albino) male/female	OECD Guideline 402 (Acute Dermal Toxicity)	_	_	LD <sub>50</sub> : > 5000 mg/kg bw
Inhalation	rat	_	-	_	LC <sub>50</sub> : > 88.8 mg/l
11.1.2 Serious eye d	amage/irritation	Irritating (OECD 405)	•		
11.1.3 Skin corrosion/irritation		Not irritating (OECD 404)			
11.1.4 Respiratory or	skin sensitization Not sensitizing (OECD 429, with magnesium nitrate, nitric acid ammonium calcin sodium nitrate)		id ammonium calcium salt,		
11.1.5 Germ cell mut	agenicity	Negative (OECD 471, 473, with nitric acid ammonium calcium salt) Negative (OECD 476, with potassium nitrate)			
11.1.6 Carcinogenici	ty:	Not carcinogenic (OECD 453, with ammonium sulfate)			
11.1.7 Reproductive toxicity:		Oral 28-day NOAEL ≥ 1500 mg/kg bw/day (OECD 422, with potassium nitrate)			
11.1.8 STOT-single e	exposure	Not available			
11.1.9 STOT-repeated exposure		Not available			



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ALOI	
11.1.10 Aspiration hazard	Not available
11.1.11 Sub-acute toxicity:	Oral 28-day NOAEL ≥ 1500 mg/kg bw/day (OECD 422, with potassium nitrate) Oral 52-week NOAEL = 256 mg/kg bw/day (OECD 453, with ammonium sulfate) Inhalation 2-weeks NOAEL ≥ 185 mg/m <sup>3</sup> (OECD 412)
11.1.12 Toxicokinetics (absorption, metabolism. distribution and elimination)	50% absorption is taken for oral, dermal and inhalation exposure.
	SECTION 12: ECOLOGICAL INFORMATION
12.1 Toxicity	
Fish (freshwater, short-term):	48-h LC <sub>50</sub> : 447 mg/l (no guideline followed)
Fish (long-term):	No data
Freshwater invertebrates (short-term):	48-h EC <sub>50</sub> /LC <sub>50</sub> : 490 mg/L
Saltwater invertebrates (long-term):	7 d EC <sub>50</sub> : 555 mg/L
Daphnia magna (short-term):	48-h EC <sub>50</sub> : 490 mg/l (no guideline followed, with potassium nitrate)
Daphnia magna (long-term):	No data
Algae:	10-d EC <sub>50</sub> : > 1700 mg/l (seawater, no guideline followed, performed with potassium nitrate)
Inhibition of microbial activity:	3-h EC <sub>50</sub> : >1000 mg/l, NOEC: 180 mg/l (OECD 209, with sodium nitrate)
12.2 Persistence and degradability	
Abiotic degradation:	
Hydrolysis:	No hydrolysable group is present, will completely dissociate into ions.
Phototransformation/photolysis:	No information available, not a required REACH endpoint.
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 52g 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 50g N/kg dissolved solid/day.
12.3 Bioaccumulative potential	
Octanol-water partition coefficient (Kow):	Not relevant as the substance is inorganic, but considered to be low (based on high water solubility)
Bioconcentration factor (BCF):	Low potential for bioaccumulation (based on substance properties).
12.4 Mobility in soil	
Known or predicted distribution to environmental compartments:	Simple inorganic salts with high aqueous solubility will exist in a dissociated form in an aqueous solution. Nitrate is not bound to the soil and will follow water movements.
Adsorption coefficient:	Low potential for adsorption (based on substance properties).
Surface tension:	No surface activity is expected for an inorganic salt at the maximum test concentration of $1 \alpha/l$
<b>12.5 Results of PBT and vPvB assessme</b> According to Annex XIII of Regulation (EC nitrate is inorganic.	c) No 1907/2006, no PBT and vPvB assessment has been conducted since ammonium
12.6 Other adverse effects: None	
12.7 Additional information: None	
	SECTION 13: DISPOSAL CONSIDERATIONS
13.1 Waste treatment methods:	Containers should be cleaned by appropriate method and then re used or dispessed by
13.1.1 Product / Packaging disposal:	Landfill or incineration as appropriate, in accordance with local and national regulations. Do not remove label until container is thoroughly cleaned.
Waste codes / waste designations according to LoW (Commission Decision 2001/118/EC):	06 10 99 Wastes not otherwise specified
13.1.2 Waste treatment-relevant information:	In accordance with local and national regulations, disposed by landfill or incineration.
13.1.3 Sewage disposal-relevant information:	Controlled biodegradation in waste water treatment is possible.
13.1.4 Other disposal recommendations:	None
13.1.4 Other disposal recommendations:	None SECTION 14: TRANSPORT INFORMATION



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14.2 UN proper shipping name:	Ammonium nitrate based	fertilizer	
14.3 Transport hazard classes:	5.1		
14.4 Packaging group:	III		
14.5 Environmental hazards:	Not available		
14.6 Special precautions for user:	Not available		
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not available		
	SECTION 15: REGULATO	RY INFORMATION	
15.1 Safety, health and environmental re	gulation/legislation spec	ific for the substance or mixtu	re:
EU Regulations	<u> </u>		
Authorisations and\or restrictions on use: Authorisation: EU Regulation (EC) No. 1907/2006 (REACH) Annex XIV - List of substances subject to authorisation Substances of very high concern Restrictions on use: COMMISSION REGULATION (EC) No 552/2009 of 22 June 2009 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as regards Annex XVII	None of the components 1. Shall not be placed on or in mixtures that contair nitrate, for use as a solic with the technical provisic out in Annex III to Regula Council. 2. Shall not be placed on that contain 16 % or more supply to: (a) downstream users an authorised in accordance (b) farmers for use in agrii related to the size of the	are listed the market for the first time after more than 28 % by weight of nit fertiliser, straight or compound ons for ammonium nitrate fertilise tion (EC) No 2003/2003 of the E the market after 27 June 2010 by weight of nitrogen in relation by weight of nitrogen in relation with Council Directive 93/15/EE cultural activities, either full time of and area.	27 June 2010 as a substance, frogen in relation to ammonium , unless the fertiliser complies ers of high nitrogen content set furopean Parliament and of the as a substance, or in mixtures to ammonium nitrate except for I or legal persons licensed or C; or part time and not necessarily
Other EU Regulations:	Telated to the size of the		
Annex I of Seveso II Directive 96/82/EC:	CAS number	Qualifying quantity (topp	(a) for the application of
Dangerous substances	CAS number		
• • • •	0.40.4 50.0	Lower tier	
Ammonium nitrate	6484-52-2	1250	5000
National regulations ( <i>country</i> ): Not available	, 		<u> </u>
15.2 Chemical safety assessment:	In accordance with REAC out for this substance.	CH Article 14 a Chemical Safety	Assessment has been carried
	SECTION 16: OTHER		
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.			
16.1 Indication of changes:	v. 3.0: Changes were ma data sheets (version 1.1) v. 3.1: Changes were ma v. 4.0: Changes were ma	de to comply with the Guidance de to comply with Article 61 (CLI de taking into account 5 <sup>th</sup> and 8 <sup>th</sup>	on the compilation of safety P) <sup>1</sup> ATP to CLP
<ul> <li>v. s.u: Page neader; 1.1; 1.2; 1.3; 1.4; 3.1; 4.1; 6.1; 6.3; 7.1; 7.2; 7.3; 8.1; 8.2; 9.1; 11.1; 12.1; 12.2; 12.4; 12.6; 12.7; 13.1; 14.5; 14.6; 14.7; 15.1</li> <li>v. 3.1: Page header; 1.2; 2.1; 16.2</li> <li>v. 4.0: Page header; 1.3; 2.2.1</li> <li>v. 4.1: Page header; 1.3</li> <li>v. 4.2: Page header; 1.3</li> <li>I6.2 Abbreviations and acronyms:</li> <li>CAS - Chemical Abstracts Service</li> </ul>			
<ul> <li>CLP - Classification, Labelling and Pac</li> <li>EC - European Commission</li> <li>EC50 - half maximal effective concentration</li> <li>ES - Exposure Scenario</li> </ul>	kaging of chemicals ation		



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<ul> <li>IBC Code - International Code for the C</li> <li>IUPAC - International Union of Pure and</li> </ul>	construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk	
LC50 - Lethal Concentration		
LD50 - Lethal Dose		
<ul> <li>LoW - List of Wastes</li> </ul>		
MARPOL - International Convention for	the Prevention of Pollution From Ships	
OECD - Organization for Economic Co-	operation and Development	
• PBT - Persistent, bioaccumulative, toxic	c chemical	
PJSC - Public Joint-Stock Company		
<ul> <li>REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals</li> </ul>		
STOT - Specific Target Organ Toxicity		
UN - United Nations		
<ul> <li>vPvB - very persistent, very bioaccumulative</li> </ul>		
16.3 Key literature references and sources for data: CSR (Chemical Safety Report), Guidance on safe use etc.		
16.4 Training advice:	In accordance with the local regulations	
16.5 Further information:	None	



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## AZOT

ANNEX

Use description related to the life cycle stage         SUB3           Use description related to the life cycle stage         PROC1/23/88/8b/9/14/15           PROC1         PROC1/23/88/8b/9/14/15           Rec1         Maintacturing of substances (ERC1)           and corresponding PROC         1. Maintacturing of substances (ERC1)           and corresponding PROC         1. Use in closed process, no likelihood of exposure (PROC1)           and corresponding PROC         1. Use in closed batch process (synthesis or formulation) (PROC6)           1. Use in closed batch process (synthesis or formulation) (PROC6)         1. Use in closed process (synthesis or formulation) (PROC6)           2. Transfer of substance or preparation (charging) form/to vesses/large containers at decidated facilities (PROC6)         1. Transfer of substance or preparation (charging) (PROC6)           2. Contributing scenario (1) controlling environmental exposure         Freduction of preparations or articles by tabletting, compression, extrustor, paleitastand (PROC1)           2. Contributing scenario (2) controlling worker exposure for manufacturing of the substance including handling, storage and analysis contines.           An environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for MROC1 (2) and Risk Management Messures (RMMs) are identical.           Product related conditions, e.g. the concentration of the RCC1 (2) and Risk Management Messures (RMMs) are identical.           Product related conditions, e.g. the conc	1 Exposure scenario (1) Manufacturing of the substance including handlin	a storage and quality controls
Order descriptions relation to the line cycle adage         PPCC1/22/38/BB/9/14/15           Name of contributing environmental scenario (1) and corresponding PROC         1.         Manufacturing of substances (ERC1)           List of names of contributing worker scenarios (2)         1.         Use in closed porcess, nol likelihood of exposure (PROC3)           List of names of contributing worker scenarios (2)         1.         Use in closed batch process, with occasional exposure (PROC2)           3.         Use in closed batch process, with occasional exposure (PROC2)         3.         Use in closed batch process, with occasional exposure (PROC3)           4.         Transfer of substance or preparation (charging/bitcharging) from/to vesses/balarge containers at non-dicational containers (dedicated filling [ine, including weighing) (PROC9)         7.           7.         Production of preparation into small containers (dedicated filling file, including weighing) (PROC5)         2.           2.1. Contributing scenario (1) controlling environmental exposure for manufacturing of the substance including handling, storage at an orividorized relation of preparation (2) controlling worker exposure for manufacturing of the substance including handling, storage at environment.           2.2. Continuous details are during manufacturing and the instruct relation of the substance including handling, storage at environment.         Solid. low dustiness           3.2. Continuous details are during maxima with the instruct relation of the substance including handling, storage at envinorment.         Solid. low dustiness	Lise descriptors related to the life cycle stage	
Name of contributing environmental scenario (1) and         1.         Manufacturing of substances (ERC1)           List of names of contributing worker scenarios         (2)         1.         Use in closed process, no likelihood of exposure (PROC1)           List of names of contributing worker scenarios         (2)         1.         Use in closed process, no likelihood of exposure (PROC1)           List of names of contributing worker scenarios         (2)         1.         Use in closed process (synthesis or formalizion) (PROC2)           2.         Use Sinter of substance or preparation (chargingdischarging) from/to vesses/substance at non-dicclascifies (PROC26)         5.           2.         Transfer of substance or preparation (chargingdischarging) from/to vesses/subrase at docidated facilities (PROC26)         6.           3.         Transfer of substance or preparation (chargingdischarging) from/to vesses/subrase at docidated facilities (PROC26)         7.           4.         Use as laboratory respont (PROC14)         8.         Use as laboratory respont (PROC15)           2.1 Contributing scenario (2) controlling environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environmental assessment in environmental environmentane envitenvitenviron environmental environmental enviters enviro	Use descriptors related to the life cycle stage	PROC1/2/3/8a/8b/9/14/15
Name of contributing environmental scenario (1) and         1.         Manufacturing of substances (ERC1)           List of names of contributing worker scenarios (2)         1.         Use in closed process, no likelihood of exposure (PROC1)           and corresponding PROC         1.         Use in closed process, no likelihood of exposure (PROC3)           3.         Use in closed batch process (synthesis or formulation) (PROC3)           4.         Transfer of substance or preparation (charging discharging) from/to vessel/singe containers at inde-dictated facilities (PROC26)           6.         Transfer of substance or preparation into small containers (idedicated facilities (PROC26))           7.         Production of preparations or anticles by tabletting, compression, extrusion, pelletisation (PROC14)           8.         Bate is aboratory reagent (PROC5)           2.1 Contributing scenario (1) controlling environmental exposure         Formatice is aboratory reagent (PROC15)           2.2 Contributing scenario (2) controlling worker exposure for manufacturing of the substance including handling, storage and quality controls           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 worker exposure for manufacturing of the substance including handling, storage and quality controls           All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures		ERC1
List of names of contributing worker scenarios [2] 1. Use in closed process, no likelihood of exposure (PROC1) 2. Manufacturing in a losed continuous process, with accasional exposure (PROC2) 3. Use in closed batch process (synthesis or formulation) (PROC3) 4. Transfer of substance or preparation (charging/discharging) from/to vessels/arge containers at and-clasticated facilities (PROC68) 5. Transfer of substance or preparation (charging/discharging) from/to vessels/arge containers at and-clasticated facilities (PROC68) 6. Transfer of substance or preparation (charging/discharging) from/to vessels/arge containers at addicated facilities (PROC68) 7. Protection of preparation (charging/discharging) from/to vessels/arge containers at declasted facilities (PROC69) 7. Protection of preparation (PROC15) 7. Protection of preparation (charging/discharging) from/to vessels/arge containers at declasted facilities (PROC69) 7. Protection release during manufacturing 7. Protection release and in the preformed as the substance or preparation (charging/discharging) from/to vessels/arge containers at declasted facilities (PROC69) 7. Protection release and in the preformed as the substance of a meet the criteria for being classified as dangerous 7. Contributing scenario (2) controlling worker exposure for manufacturing of the substance including handling, storage 7. An environmental assessment has not been performed as the substance localitions (OCs) and Risk Management 7. Manufacture (PROC1) 7. Manufacture (PROC15) 7. Protect characteristic 7. Product related conditions, e.g. the concentration of the 7. substance in a mixture, the physical state of that mixtur 7. Manufacture (PROC1) 7. Protect related conditions, e.g. the concentration of the 7. substance for an mixture, the physical state of that mixture 7. Manufacture (PROC1) 7. Manufacture (PROC1) 7. Manufacture (PR	Name of contributing environmental scenario (1) and corresponding ERC	1. Manufacturing of substances (ERC1)
and corresponding PROC       2.       Manufacturing in a closed continuous process, with occasional exposure (PROC2)         a. Use in closed batch process (synthesis or formulation) (PROC3)       4.       Transfer of substance or preparation (charging/discrigging) form/to vessels/large containers at non-dedicated facilities (PROC8)         6.       Transfer of substance or preparation (charging/discrigging) form/to vessels/large containers at dedicated facilities (PROC8)         7.       Production of preparations" or ralides by tableting, compression, extrusion, palletisation (PROC15)         2.1 Contributing scenario (1) controlling environmental exposure       Emvironmental release during manufacturing         Ref       Ref       Ref         An environmental release during manufacturing       Environmental exposure         Environmental.       Product for preparations" or ralides by tableting, compression, extrusion, palletisation (PROC15)         2.1 Contributing scenario (2) controlling worker exposure for manufacturing of the substance including handling, storage         An environmental.       Product release during whysical state of that muture (sold, lowd) are identical exposure         Product release during on unsurfacturing of the substance in exposure for assessment or exposure exposure       Not applicable.         Product release during on unsurfacturing of the substance in esclusion (Occ) and Risk Management workers exposure       Not applicable.         Product released conditions, e.g., the concentration of the substance in easkatat	List of names of contributing worker scenarios (2)	1. Use in closed process, no likelihood of exposure (PROC1)
(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 dedicated faillities (PROC8)           5. Transfer of substance or preparation (charging)/from/to vessels/large containers at dedicated faillities (PROC8)           6. Transfer of substance or preparation in small containers (dedicated filling line, including weighing) (PROC3)           7. Production of preparations* or articles by tabletting, compression, extrusion, pelletisation (PROC15)           2.1 Contributing scenario (1) controlling environmental exposure           Environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environmental.           2.2 Contributing scenario (2) controlling worker exposure for manufacturing of the substance including handling, storage and quality controls.           All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures (RMW) are identical.           Product characteristic           Product related conditions, e.g. the concentration of the substance in a mixture, the physical state of that mixture (solid, lipuid, if solid: level of dustiness), package design affecting exposure           Preduct related conditions is on ended for assessment worker's begoure           Preduct related conditions is on ended for assessment the information is not needed for assessment worker's begoure           Preduct perational conditions is on tended for assessment anotar u	and corresponding PROC	2. Manufacturing in a closed continuous process, with occasional exposure
3. Üse in closed batch process (synthesis or formulation) (PROC3)     4. Transfer of substance or preparation (charging/discriging) from/to vessels/arge containers at non-dedicated facilities (PROC8b)     5. Transfer of substance or preparation (charging/discriging) from/to vessels/arge containers at dedicated facilities (PROC8b)     7. Production of preparations' or articles by tabletting, compression,     extrusion, palletisation (PROC15)     7. Production of preparations' or articles by tabletting, compression,     extrusion, palletisation (PROC15)     7. Production of preparations' or articles by tabletting, compression,     extrusion, palletisation (PROC15)     7. Product of articles are covered by this contributing scenario (2) controlling worker exposure     Forduct related scaling scenario (2) controlling worker exposure for manufacturing of the substance including handling, storage     and process tablety are identicated facilities (2) controlling worker exposure     Forduct related conditions, e.g. the concentration of the     substance in a moture, the physical state of that muture     (sold, liquid; if solid: level of dustiness), package design     frequency and duration of use/exposure     Frequency and duration of use/exposure     Frequency and duration of use/exposure     Transfer substance in exposure     Transfer substance in exposure in		(PROC2)
4.       Transfer of substance or preparation (charging) from/to vessels/large containers at non-diacticated failities (PROC8)         5.       Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated failities (PROC8)         6.       Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated failities (PROC8)         7.       Production of preparations* or atticles by tabletting, compression, extrusion, pellottation (PROC15)         2.1 Contributing scenario (1) controlling environmental exposure       Environmental release during manufacturing         ERC1       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 worker exposure for manufacturing of the substance including handling, storage and quality controls         All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures (RMMs) are identical.         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         Amounts used at workplace (per task or per shift) and frequency (a.g. single events or repeated) of exposure       Not applicable.         Other given operational conditions e.g. technology or process techniques determining the initial release of loustance proces in thore or epeated.		3. Use in closed batch process (synthesis or formulation) (PROC3)
vessels/arge containers at non-dedicated facilities (PROC8a)     5. Transfer of substance or preparation (charging/discharging) from/to     vessels/arge 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 environmental exposure     Environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous     tor the environment.     2.2 Contributing scenario (2) controlling worker exposure for manufacturing of the substance including handling, storage     and quality controls     All Process: Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management     PROC1/2/38/a/b/14/15     Product characteristic     Product characteristic     Product characteristic     Product characteristic     Product characteristic     Amounts used at workplace (per task or per shift); note:     Amounts used at workplace (per task or per shift); note:     More than 4 hours per day     frequency (e.g., single events or repeate) of exposure     Human factors not influenced by risk management     Prequency and duration of use/exposure     Human factors not influenced by risk management     Process techniques derivers         repeates) or repeate() of exposure     Human factors not influenced by risk management     Process feeloficies arrivers         repeates) or exposure 0     Process design atiming to instruct end pressure.         Controlling and measures to presentive from process level dovors/moors,         repressing conditions or repeate() or exposure         repressing conditions affecting worker exposure         reparation or the activity         reperinsel activity (e.g., hours per shift), none:         repressinge		4. Transfer of substance or preparation (charging/discharging) from/to
vessels/arge containers at dedicated failling (ine, including weighing) (PROC8)     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 environmental exposure     Environmental nelease during manufacturing     ERC1     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 worker exposure for manufacturing of the substance including handling, storage     and quality controls     All Process: Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management     PPocl1/2/38/ab/91/41/5     Product characteristic     Product characteristic     Product characteristic     Amounts used at a workplace (per task or per shift), note:     ametide conditions, e.g., the concentration of the     substance in a mixture, the physical state of that mixture     frequency (e.g., single events or repeate) of exposure     Amounts used at a workplace (per task or per shift), and     More than 4 hours per day     frequency (e.g., single events or repeate)     for sposure     Human factors not influenced by risk potentially     Not applicable     exposure of the nature of the activity     foregenese (readitions affecting workers exposure     foregreent operational conditions (e.g., body park potentially     Not applicable     exposure of the nature of the activity     for given operational conditions (e.g., body park potentially     for given operational conditions for exposure     for given operational conditions for the satesesment     for given operational conditions for the satesesment     for given operational conditions for exposure     for given operational conditions for exposure     fo		vessels/large containers at non-dedicated facilities (PROC8a) 5. Transfer of substance or preparation (charging/discharging) from/to
E. Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (PROC9)     7. Production of preparations' or articles by tabletting, compression, extrusion, pelletasion (PROC14)     8. Use as laboratory reagent (PROC15)     2.1 Contributing scenario (1) controlling environmental exposure Environmental release during manufacturing ERC1     An environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous     or the environment.     2.2 Contributing scenario (2) controlling worker exposure for manufacturing of the substance including handling, storage     and quality controls.     All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management     Measures (RMMs) are identical.     Product related conditions, e.g. the concentration of the     substance in a mixture, the physical state of that mixture     solid, low dustiness     used at a workplace (per task or per shift) and     difficung exposure     Amounts used     Amounts used     Amounts used A		vessels/large containers at dedicated facilities (PROC8b)
7.       Production of preparations or articles by tabletting, compression, extrusion, pelletisation (PROC14)         8.       Use as laboratory reagent (PROC15)         2.1 Contributing scenario (1) controlling environmental exposure       Environmental release during manufacturing         ERC1       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 worker exposure for manufacturing of the substance including handling, storage and quality controls         All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management PROC1/2/3/8/8/b/9/1/15         Product characteristic         Product eliated conditions, e.g. the concentration of the substance including handling, storage design affecting exposure         Amounts used 1 a workplace (per task or per shift) note: sometimes this information is not needed for assessment of worker's exposure       Not applicable.         Process conditions of use, e.g. body parts potentially       Not applicable         Other given operational conditions affecting workers exposure       Indoors         Other given operational conditions is not needees of exposure exposure exposure       Not applicable         Process conditions of use, e.g. body parts potentially       Not applicable         Other given operational conditions affecting workers exposure       Indoors         Other given operational ende		6. I ranster of substance or preparation into small containers (dedicated
Production of preparators of the process of tableting, compression, extrusion, peliestation (PROC14)     B. Use as laboratory reagent (PROC15)     2.1 Contributing scenario (1) controlling environmental exposure     Environmental release during manufacturing     ERC1     An environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous     for the environmental.     2.2 Contributing scenario (2) controlling worker exposure for manufacturing of the substance including handling, storage     and quality controls     All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management     Measures (RMMs) are identical.     Product characteristic     Product site of dustiness, package design     affecting exposure     Amounts used at a workplace (per task or per shift) and     dworker's exposure     Uration per task/activity (e.g. hours per shift) and     frequency (e.g. angle events or repeated) of exposure     Uration per task/activity (e.g. hours per shift) and     frequency (e.g. angle events or repeated) of exposure     Process techniques determining the initial release of     substance on process into enditions affecting workers exposure     Terpical conditions and measures at process level (source) to prevent release     Process design alming to prevent releases of must and releases of more process includings exposure     Process design alming to prevent releases of the proteoment, performance     or animetic performance of     ontainment to be specifie (e.g. quantification of     support the functioning of particular technical measures     for process techniques conditions and measures of control dispersion from source towards the worker     Engineering controls, e.g. exhaust ventilation, general     . Containment as appropriate		Tilling line, including weigning) (PROC9)
B. Use as laboration (Procent)     B. Use as l		A Production of preparations of anticles by tabletting, compression,
2.1 Contributing scenario (1) controlling environmental exposure         Environmental release during manufacturing         ERC1         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 worker exposure for manufacturing of the substance including handling, storage and quality controls         All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures (RMMs) are identical.         PROC1/273/Ba/Bb/91/41/5         Product related conditions, e.g. the concentration of the substance in a mxture. The physical state of that mxture (solid, liquid, if solid: level of dustiness), package design affecting exposure         Amounts used         Amounts used         Amounts used         Amounts used at a workplace (per task or per shift); note: sometimes this information is not needed for assessment of vorker's exposure         Frequency (a, single events or repeated) of exposure         Puration per task/addivity (e.g. hours per shift); and texposate as result of the nature of the activity         Other given operational conditions affecting workers exposure         Other given operational conditions affecting workers exposure         Other given operational conditions affecting workers exposure         Other given operational conditions at process level (source) to prevent release         Process design animing to p		8 Use as laboratory reagent (PROC15)
Environmental release during mandacturing ERC1 An environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environmental assessment (assessment does and assessment does not meet the criteria for being classified as dangerous performations (OCs) and Risk Management Measures (RMMs) are identical. Product createristic Product related conditions, e.g. the concentration of the substance in a mixture, the physical state of that mixture (sold, liquid, if solid: level of dustiness), package design affecting exposure Amounts used Amounts used Amounts used Human factors not influenced by risk management Particular conditions of repeated) of exposure Unartion per task/activity (e.g. hours per shift); note: Prequency (e.g. single events or repeated) of exposure Unartion per task/activity (e.g. hours per shift) and Particular conditions of the activity Other given operational conditions; e.g. body parts potentially exposed as a result of the nature of the activity Other given operational conditions; e.g. body parts potentially exposes techniques determining the initial release of substance from process into workers environment; room volume, whether the work is carried out outdoors/indoors, 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 and measures to control dispersion from source towards the worker Englineering controls, e.g. exhaust ventilation, general 1. Containment as appropriate 2. God standard of general ventil	2.1 Contributing scenario (1) controlling environm	ental exposure
ERC1         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 worker exposure for manufacturing of the substance including handling, storage and quality controls         All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures (RMMs) are identical.         PROC1/12/3/8/B/9/14/15         Product related conditions, e.g. the concentration of the substance in mitting exposure         Amounts used at a workplace (per task or per shift); note: sometimes this information is not needed for assessment of worker's exposure         Prequect Q, e.g. single events or repeated) of exposure         Puration per task/activity (e.g. hours per shift); note: supposed as a result of the nature of the activity         Not applicable         Particular conditions of use/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       Indoors         Process techniques determining the initial release of substance in process in optiment and pressure.       Not applicable         Process design aiming to prevent releases and hence exposure       Not applicable         Process design aiming to prevent releases and hence exposure	Environmental release during manufacturing	
An environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environment. 22 Contributing scenario (2) controlling worker exposure for manufacturing of the substance including handling, storage and quality controls All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management PROC1/23/abb/91/41/5 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 Amounts used Amounts used Amounts used Frequency and duration of use/exposure Frequency and duration of use/exposure Human factors not influenced by risk management Particular conditions e, e.g. body parts potentially exposed as a result of the nature of the activity Other given operational conditions: e.g. technology or process techniques determining the initial releases of substance from process into workers environment; room volume, whether the work is carried out outdoors/indoors, process conditions and measures at process level (source) to prevent release Proces design alming to prevent releases and hence Not applicable Process design alming to prevent releases and hence Not applicable Process design alming to prevent releases and hence Not applicable Process design alming to prevent releases and hence Process design alming to prevent releases and hence Not applicable Process design alming to prevent releases and hence Process design alming to prevent releases and hence Not applicable Process design alming to prevent releases and hence Proces design alming to prevent releases and hence Proces design alming to prevent releases and he	ERC1	
for the environment.       2.2 Contributing scenario (2) controlling worker exposure for manufacturing of the substance including handling, storage and quality controls         All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures (RMMs) are identical.       Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures (RMMs) are identical.         PRODUC tharacteristic       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 alfecting exposure       Solid, low dustiness         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.         Prequency and duration of use/exposure       More than 4 hours per day         Human factors not influenced by risk management       Not applicable         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: e.g. technology or lorocess techniques determining the initial release of substance from process into workers environment; room volume, whether the work is carried out utodors/indoors, process conditions and measures at process level (source) to prevent release       Not applicable         Process design alming to prevent releases and hence exposure of workers; this in particular includes conditions ensores of using a manuming to prevent ifelases of using a many toreleases o	An environmental assessment has not been performe	d as the substance does not meet the criteria for being classified as dangerous
2.2 Contributing scenario (2) controlling worker exposure for manufacturing of the substance including handling, storage and quality controls         All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures (RMMs) are identical.         PROC1/23/adbs/914/15         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         Amounts used       Amounts used       Not applicable.         Amounts used       More than 4 hours per day         Hrequency (e.g., single events or repeated) of exposure       More than 4 hours per day         Human factors not influenced by risk management       More than 4 hours per day         Prequency (e.g., single events or repeated) of exposure       Exposure         Uther given operational conditions a (e.g. tornotogy or lindoors       Indoors         Other given operational conditions a reg. etc) totogy or lindoors       Indoors         Procuss sching the number of the substance from process into workers exposure       Not applicable         Procuss catigin aring the prevent releases of substance from process into workers entrocess level (source) to prevent release       Not applicable         Procuss catigin aring to prevent releases and hence exposure a conditions and measures to recoseled or discoording or lindoors       Not applicable	for the environment.	
and quality controls	2.2 Contributing scenario (2) controlling worker ex	posure for manufacturing of the substance including handling, storage
All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures (RMMs) are identical.         PROC1/23/Ba/8b/9/14/15         Product characteristic         Product talead 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         Amounts used         Amounts used         Amounts used         Duration per task/activity (e.g., hours per shift) and (see sposure)         Particular conditions of influenced by risk management         Particular conditions of use, e.g., body parts potentially exposed as a result of the nature of the activity         Particular conditions of use, e.g., body parts potentially exposed as a result of the nature of the activity         Other given operational conditions: e.g. technology or Indoors         process techniques determining the initial release of substance from process indo workers exprosure.         Other given operational conditions: a trapeatore and pressure.         Prechnical conditions and measures and pressure.         Process design animing to prevent releases and hence exposure of workers: this in particular includes conditions of e.g. exhaust ventilation, general         1       Containment as appropriate         Process design animing to prevent releases, of summer end pressure.       1. Containment as appropriate         Process design animing to preventilation of	and quality controls	
Measures (RMMs) are identical.         PROC1/2/3/8/8b/9/14/15         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         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.         Prequency 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 management       Not applicable       Concentration of use/exposure         Other given operational conditions affecting workers exposure       Indoors       Indoors         Other given operational conditions affecting workers exposure       Indoors       Process techniques dust in initial release of substance from process into workers environment; room volume, whether the work is carried out outdoors/indoors, process conditions rate to temperature and pressure.       Not applicable         Process design aiming to prevent releases and hence.       Not applicable       Not applicable         Process design aiming to prevent releases and hence.       Not applicable       Solid low dust in the worker         Process design aiming to prevent releases and hence.       Sol applicable       Sol applicable         Process design aiming to prev	All Process Categories are covered by this contrib	uting scenario as all Operational Conditions (OCs) and Risk Management
PROCI12/38/38/39/14/15         Product hearacteristic         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         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.         Zequency 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 management       Particular conditions of use, e.g. body parts potentially       Not applicable         Particular conditions of use, e.g. body parts potentially       Not applicable       Solid lows         Other given operational conditions e.g. 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 and measures at process level (source) to prevent release       Not applicable         Process design aiming to prevent releases and hence exposure of workers; this in particular includes conditions of residual losses or exposure)       Not applicable         Process design aiming to prevent velication of residual losses or exposure of workers; this in particular locudes for process of measure to control dispersion from source towards the worker       Solid locudation         Process design aiming to prevent	Measures (RMMs) are identical.	
Product characteristic         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         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       More than 4 hours per day         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         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       Indoors         Other given operational conditions affecting workers exposure       Indoors         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.       Not applicable         Process design aiming to prevent releases and hence exposure of workers; this in particular includes conditions ensures to provent releases of masures to control dispersion from source towards the worker       Not applicable         Process design aiming to prevent releases of measure to control dispersion from source towards the worker       1. Containment as app	PROC1/2/3/8a/8b/9/14/15	
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         Amounts used       a workplace (per task or per shift); note: sometimes this information is not needed for assessment       Not applicable.         Amounts used       mounts used at a workplace (per task or per shift); note: sometimes this information is not needed for assessment       Not applicable.         Prequency and duration of use/exposure       mounts used at a workplace (per task or per shift) and frequency (e.g. single events or repeated) of exposure       More than 4 hours per day         Human factors not influenced by risk management       Particular conditions of use, e.g. body parts potentially       Not applicable         Particular conditions of use, e.g. body parts potentially       Not applicable       Indoors         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         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 <b>Technical conditions and measures to control dispersion from source towards the worker</b> 1. Containment as appropriate	Product characteristic	
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(solid, liquid; if solid: level of dustiness), package design affecting exposure       Image: Solid: level of dustiness), package design affecting exposure         Amounts used at a workplace (per task or per shift); note: of worker's exposure       Not applicable.         Prequency and duration of use/exposure       Image: Solid: level of dustiness), package design drequency (e.g. single events or repeated) of exposure         Human factors not influenced by risk management       More than 4 hours per day         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: e.g. technology or uolume, whether the work is carried out outdoors/indoors, process techniques determining the initial release of substance from process into workers environment; room volume, whether the work is carried out outdoors/indoors, 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       1. Containment as appropriate 2. Good standard of general ventilation containment to be specified (e.g. by quantification of residual losses or exposure)         Technical conditions and measures to control dispersion from source towards the worker         Engineering controls, e.g. exhaust ventilation, general ventilation; specify effectiveness of measures (e.g. training and supervision). Those measures needed to support the functioning of	substance in a mixture, the physical state of that mix	ture
affecting exposure       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) of exposure       Moore than 4 hours per day         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       Indoors       Indoors         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 and measures at process level (source) to prevent release       Not applicable         Process design aiming to prevent releases and hence exposure of workers; this in particular includes conditions of esidual losses or exposure)       Not applicable         Technical conditions and measures to control dispersion from source towards the worker       1. Containment as appropriate         Process design aiming to prevent/limit releases, dispersion and exposure       2. Good standard of general ventilation         Orter given operational conditions and measures to control dispersion from source towards the worker       2. Good standard of general ventilation         Process design aiming to preve	(solid, liquid; if solid: level of dustiness), package de	sign
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ensuring rigorous containment; performance of containment to be specified (e.g. by quantification of residual losses or exposure)       residual losses or exposure)         Technical conditions and measures to control dispersion from source towards the worker         Engineering controls, e.g. exhaust ventilation, general ventilation; specify effectiveness of measure       1. Containment as appropriate         Organisational measures to prevent/limit releases, dispersion and exposure       2. Good standard of general ventilation         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 iustify exposure based waiving)       Not applicable	exposure of workers; this in particular includes condition	ions
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Technical conditions and measures to control dispersion from source towards the worker         Engineering controls, e.g. exhaust ventilation, general ventilation; specify effectiveness of measure       1. Containment as appropriate         ventilation; specify effectiveness of measure       2. Good standard of general ventilation         Organisational measures to prevent/limit releases, dispersion and exposure       2. Good standard of general ventilation         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	residual losses or exposure)	
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ventilation; specify effectiveness of measure       2. Good standard of general ventilation         Organisational measures to prevent/limit releases, 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	Engineering controls, e.g. exhaust ventilation, ger	eral 1. Containment as appropriate
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support the functioning of particular technical measures needed to (e.g. training and supervision). Those measures need to be reported in particular for demonstrating strictly controlled conditions (to justify exposure based waiving)	Organisational measures to prevent/limit releases	d to Not applicable
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be reported in particular for demonstrating strictly controlled conditions (to justify exposure based waiving)	support the functioning of particular technical meas	
controlled conditions (to justify exposure based waiving)	be reported in particular for demonstrating str	
	controlled conditions (to justify exposure based waivin	a).



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SAFETY DATA SHEET (according to Regulation (EC) No 1907/2006 (REACH), ANNEX II)

AZOT			
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)			
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.			
I he leading toxicological effect is eye irritation (local endpoint), for which ho DNEL can be derived as no dose-response information is			
DNELs) a quantitative assessment is not considered pecessary.			
4 Guidance to DII to evaluate whether he works inside the boundaries set by the FS			
No additional risk management measures, besides those that are mentioned above, are needed to quarantee 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;			
<ul> <li>Segregation of the emitting process;</li> </ul>			
- Effective contaminant extraction;			
- Good standard of general ventilation;			
- Minimisation of manual phases;			
<ul> <li>Avoidance of contact with contaminated tools and objects;</li> </ul>			
- Regular cleaning of equipment and work area;			
<ul> <li>Management/supervision in place to check that RMMs in place are being used correctly and OCs followed;</li> </ul>			
- I raining statt on good practice;			
- Good standard of personal hygiene.			



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# AMMONIUM NITRATE Revision date: 01.05.2020 Version 4.2

1 Exposure scenario (2)	
Industrial use for formulation of preparations/article	es, intermediate use and end-use in industrial settings.
Use descriptors related to the life cycle stage	503/10 PC1/11/12/10/37
	PROC1/2/3/5/8a/8b/9/13/15
	ERC2/6a
Name of contributing environmental scenario (1) and	1. Formulation of preparations (ERC2)
corresponding ERC	2. Industrial use resulting in manufacture of another substance (use of
	intermediates) (ERC6a)
List of names of contributing worker scenarios (2)	<ol> <li>Use in closed process, no likelihood of exposure (PROC1)</li> </ol>
and corresponding PROC	2. Use in closed, continuous process with occasional controlled exposure
	(PRUU2)
	A Mixing or blending in batch processes for formulation of preparations and
	articles (multistage and/or significant contact) (PROC5)
	5. Transfer of substance or preparation (charging/discharging) from/to
	vessels/large containers at non-dedicated facilities (PROC8a)
	6. Transfer of substance or preparation (charging/discharging) from/to
	vessels/large containers at dedicated facilities (PROC8b)
	7. Transfer of substance or preparation into small containers (dedicated
	filling line, including weighing) (PROC9)
	<ul> <li>Treatment of anticles by dipping and pouning (PROCTS)</li> <li>Use as laboratory reagent (PROC15)</li> </ul>
2 1 Contributing scenario (1) controlling environme	antal exposure
Formulation of preparations (FRC2) and industrial use re	sulting in manufacture of another substance (use of intermediates) (ERC6a) An
environmental assessment has not been performed as the	e substance does not meet the criteria for being classified as dangerous for the
environment.	5 5
2.2 Contributing scenario (2) controlling worker	exposure for industrial use for formulation of preparations/articles,
intermediate use and end-use in industrial settings	
All Process Categories are covered by this contribu	ting scenario as all Operational Conditions (OCs) and Risk Management
Measures (RMMs) are identical. PROC1/2/3/5/8a/8b/9/	13/15
Product characteristic	Solid low dustings
the substance in a mixture, the physical state of that	
mixture (solid, liquid; if solid; level of dustiness).	
package design affecting exposure	
Amounts used	
Amounts used at a workplace (per task or per shift);	Not applicable
note: sometimes this information is not needed for	
assessment of worker's exposure	
Frequency and duration of use/exposure	
frequency (e.g. single events or repeated) of evenceure	More than 4 hours per day
Human factors not influenced by risk management	
Particular conditions of use e.g. body parts potentially	Not applicable
exposed as a result of the nature of the activity	
Other given operational conditions affecting worke	rs exposure
Other given operational conditions: e.g. technology or	Indoors
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	
Technical conditions and measures at process leve	l (source) to prevent release
Process design aiming to prevent releases and hence	Not applicable
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)	
Technical conditions and measures to control disp	ersion from source towards the worker
Engineering controls, e.g. exhaust ventilation, general	1. Containment as appropriate
ventilation; specify effectiveness of measure	2. Good standard of general ventilation
Specific organizational measures or measures needed	Not applicable
to support the functioning of particular technical	
measures (e.g. training and supervision). Those	
measures need to be reported in particular for	



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## AMMONIUM NITRATE

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demonstrating strictly controlled conditions (to justify				
exposure based waiving).				
Conditions and measures related to personal protection, hygiene and health evaluation				
Personal protection, e.g. wearing of gloves, face 1. Chemical goggles				
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)				
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				
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;				
<ul> <li>Avoidance of contact with contaminated tools and objects;</li> </ul>				
- Regular cleaning of equipment and work area;				
- Management/supervision in place to check that RMMs in place are being used correctly and OCs followed;				
- Iraining statt on good practice;				
- Good standard of personal hygiene;				



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1 Exposure scenario (3)			
Professional use in formulation of prenarations 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	1. Wide dispersive indoor use of reactive substances in open systems (ERC8b)		
corresponding ERC	2. Wide dispersive outdoor use of reactive substances in open systems (ERC8e)		
List of names of contributing worker scenarios (2)	1. Use in closed process, no likelihood of exposure (PROC1)		
and corresponding PROC	2. Use in closed, continuous process with occasional controlled exposure		
	(PROC2)		
	3. Transfer of substance or preparation (charging/discharging) from/to		
	vessels/large containers at non-dedicated facilities (PROC8a)		
	4. Transfer of substance or preparation (charging/discharging) from/to		
	vessels/large containers at dedicated facilities (PROC8b)		
	5. I ransfer of substance or preparation into small containers (dedicated		
	ning line, including weigning) (PROC9)		
	6. Non industrial spraying (PROCTT)		
	Ose as laboratory reagent (FROCIS)     Hand mixing with intimate contact and only DPE available (DPOC10)		
2.1 Contributing scenario (1) controlling environm			
Wide dispersive indeer use of reactive substances in o	nen systems (EPC8b) and wide dispersive outdoor use of reactive substances		
in open systems (FRC8e). An environmental assess	nent 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 worker e	xposure for professional use in formulation of preparations and end-use		
All Process Categories are covered by this contribution	uting scenario as all Operational Conditions (OCs) and Risk Management		
Measures (RMMs) are identical. PROC1/2/8a/8b/9/11/	15/19		
Product characteristic			
Product related conditions, e.g. the concentration of	Solid, low dustiness		
the substance in a mixture, the physical state of that	Liquid, >25% substance in the product		
mixture (solid, liquid; if solid: level of dustiness),			
package design affecting exposure			
Amounts used			
Amounts used at a workplace (per task or per shift);	Not applicable		
note: sometimes this information is not needed for			
Erequency and duration of use/exposure			
Duration por tack/activity (a.g. hours por shift) and	More than 4 hours per day		
frequency (e.g. single events or repeated) of	More than 4 hours per day		
evolution (e.g. single events of repeated) of			
Human factors not influenced by risk management			
Particular conditions of use, e.g. body parts potentially	Not applicable		
exposed as a result of the nature of the activity			
Other given operational conditions affecting worke	ers exposure		
Other given operational conditions: e.g. technology or	Indoors or outdoors		
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.			
Technical conditions and measures at process leve	el (source) to prevent release		
Process design aiming to prevent releases and hence	Not applicable		
exposure of workers; this in particular includes			
conditions ensuring rigorous containment;			
performance of containment to be specified (e.g. by			
quantification of residual losses of exposure)	arcien from course towards the worker		
Engineering controls e.g. exhaust ventilation, general	1 Containment as appropriate		
ventilation: specify effectiveness of measure	2. Good standard of general ventilation		
ventilation, specify enectiveness of measure	2. Out standard of general ventilation		
	designed to prevent splashes/spills/ exposure to occur		
Organisational measures to prevent/limit releases.	dispersion and exposure		
Specific organisational measures or measures	Not applicable.		
needed to support the functioning of particular			
technical measures (e.g. training and supervision).			
Those measures need to be reported in particular for			



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demonstrating strictly controlled conditions (to justify				
exposure based waiving).				
Conditions and measures related to personal protection, hygiene and health evaluation				
Personal protection, e.g. wearing of gloves, face	1. Chemical goggles			
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)				
3 Exposure information and reference to its source	e			
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 qua	antitative 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 a	Iso advised and communicated through Safety Data Sheets. Such as:			
<ul> <li>Containment as appropriate;</li> </ul>				
<ul> <li>Minimise number of staff exposed;</li> </ul>				
<ul> <li>Segregation of the emitting process;</li> </ul>				
<ul> <li>Effective contaminant extraction;</li> </ul>				
<ul> <li>Good standard of general ventilation;</li> </ul>				
<ul> <li>Minimisation of manual phases;</li> </ul>				
- Avoidance of contact with contaminated tools	and objects;			
<ul> <li>Regular cleaning of equipment and work area;</li> </ul>				
<ul> <li>Management/supervision in place to check that RMMs in place are being used correctly and OCs followed;</li> </ul>				
<ul> <li>I raining staff on good practice;</li> </ul>				
I (-ood standard of personal hygiana				



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1 Exposure scenario (4)			
Consumer end-use of rentilizers and matches/fireworks			
Use descriptors related to the life cycle stage	SU21		
	PC11/12		
	ERC8b/8e/10a		
Name of contributing environmental scenario (1) and	1. Wide dispersive indoor use of reactive substances in open systems		
corresponding ERC	(ERC8b)		
	2. Wide dispersive outdoor use of reactive substances in open		
	systems (ERC8e)		
	3. Wide dispersive outdoor use of long-life articles and materials with		
	low release (ERC10a)		
List of names of contributing consumer scenarios (2) and	1 Explosives (PC11)		
corresponding PC and sub-product categories if	2 Eartilizers (PC12)		
2.1 Contributing cooperio (1) controlling environments			
2.1 Contributing Scenario (1) controlling environmenta	il exposure		
vvide dispersive indoor use of reactive substances in open	systems (ERC8b), wide dispersive outdoor use of reactive substances in		
open systems (ERC8e) and wide dispersive outdoor use of	long-life articles and materials with low release (ERC10a).		
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) consumer end-use of fe	rtilizers and matches/fireworks		
All Product Categories are covered by this contributing	scenario as all Operational Conditions (OCs) and Risk Management		
Measures (RMMs) are identical. Exposure to eve irritating	dilutions can occur during consumer use of fertilizers (PC12). No exposure		
is expected from the use of matches/fireworks (PC11)	······································		
Product characteristic			
Product related conditions, o.g. the concentration of the	Solid low ductiness		
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	Products containing $\geq 10\%$ and $< 10\%$ .		
affecting exposure			
Amounts used			
Amounts used per event	Not applicable		
Frequency and duration of use/exposure			
Duration of exposure per event and frequency of events:	Not applicable		
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			
Chanter R 15)			
Human factors not influenced by risk management			
Derticular conditions of use of whether heady north notantially	Netenplieshle		
Particular conditions of use, e.g. body parts potentially	Not applicable		
exposed; population potentially exposed (adults, children)			
Other given operational conditions affecting workers e	xposure		
Other operational conditions e.g. room volume, air	Indoors or outdoors		
exchange rate, outdoor or indoor use			
Conditions and measures related to information and be	ehavioral advice to consumers		
Safety advice to be communicated to consumers in order	Avoid splashing		
to control exposure, e.g. technical instruction, behavioral			
advice			
Conditions and measures related to personal protection	n and hygiene		
Personal protection e.g. wearing of gloves face protection	1 If >10% of ammonium nitrate: Use chemical goggles		
full hady dermal protection, apagles, reapiratory apagity	1. If $\geq 10\%$ of ammonium nitrate. Ose chemical goggies		
full body definal protection, goggles, respirator, specify	2. If <10% of ammonium mitrate. To personal protection needed		
effectiveness of measure; specify the suitable material for the	3. Instructions addressed to the consumer via product labelling		
PPE (where relevant) and advise now long the protective			
equipment can be used before replacement (if relevant).			
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 co	nsumers. The leading toxicological effect is eve 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 bids			
lavels of substance that humans are normally not exposed to (see DNELs) a quantitative assessment is not considered persessary			
4 Guidance to DII to evaluate whether he works inside the boundaries set by the FS			
A Guidance to DU to evaluate whether he works inside the boundaries set by the ES			
INO additional risk management measures, besides those	se that are mentioned above, are needed to guarantee safe use for		
workers/consumers for use of fertilisers:			
It ≥10% ammonium nitrate: Use chemical goggles			
If <10% ammonium nitrate: No personal protection needed			