Safety Data Sheet According to Commission Regulation (EU) N° 2015/830

Fertiberia

Issue date	11/07/2013
Issue	3
Review date	31/05/2016
Review	4

Calcium Nitrate Solution

SECTION 1	1 Identification of the substance/mixture and of the company/undertaking							
1.1	Product identifier							
	Product commercial name		Calcium Nitrate Solut	tion				
	Chemical name		Not applicable					
	Other names		Not applicable					
	Chemical formula		Not applicable					
	EU index number (Appendix	1)	Not applicable					
	CE No		Not applicable					
	CAS No.		Not applicable					
	REACH or National product r number	registration	Not applicable					
1.2	Relevant identified uses of the	ne substance or mi	xture and uses advis	ed against				
	Identified uses		Fertiliser, waste wate	er treatment, laborato	ory chemical produ	uct, building materials		
	Uses advised against							
1.3	Details of the supplier of the	safety data sheet						
	Company name		FERTIBERIA. S.A.					
	Company address		Paseo de la Castella	na, 259 D. Plantas 4	7 y 48 - 28046 M	adrid		
	Company telephone number		Central: 91.586.62.0 Sagunto Factory: 962	0; 2.69.90.04				
	Company email for SDS		reachfertiberia@	fertiberia.es				
1.4	Emergency telephone number	er	Sagunto Factory: 96	2.69.90.04				
SECTION 2	Hazards identification							
2.1	Classification of the subst	ance or mixture*	According to Regulat Acute tox. cat 4; H30 Eye Dam. 1; H318	tion EC 1272/2008 [()2	CLP]			
			Pictograms		Signal word	Hazard statements	Precautionary Statemen	ts
2.2	.2 Label elements				Danger	H302 H318	P264 P280 P301+P312 P305+P351+P338 P310	
2.3	Other hazards				•	•		
* To unders	tand the full meaning of hazar	d statements (H): s	ee section 16					
SECTION 3								
OLOHON S	composition/information on	Ingredients			1	[1
3.2	Name	% (w/w)	CAS No.	IUPAC	Index No R.1272/2008	REACH Registration Number	Classification Regulation 1272/2008	Specific concentration limits
	Calcium nitrate	≥ 25 and < 69	10124-37-5	calcium dinitrate	-	01-2119495093-35-0011	Oxidising Solid. Cat3;H272 Acute Toxicity. Cat4; H302 Eye Dam. Cat1; H318	

	Calcium Nitrate Solution									
SECTION 4	First aid measures									
4.1	Description of first aid measu	ires								
	Ingestion		Do not induce vomiti	ng. If victim is consci	ious, rinse mouth	and give water or	milk to drink. If ill	-feeling persists or vict	im is unconscious, o	all a doctor.
	Contact with skin		Wash affected zone	with soap and water						
	Contact with eyes		Remove contact lens	ses if present and ea	sy to do. Rinse eg	es with running w	ater for at least 1	15 minutes.		
4.2	Most important symptoms an	d effects, both act	ute and delayed							
	eyes		Causes serious eye	damage.						
	ingestion		Can produce disorde Depending on the an	Can produce disorders in intestinal tract as well as burns in the mouth, throat and digestive system. Depending on the amount ingested, it may cause poisoning						
4.3	Indication of any immediate r	nedical attention a	nd special treatment	needed						
SECTION 5	Firefighting measures									
5.1	Extinguishing media									
	Suitable extinguishing media		Water							
	Unsuitable extinguishing mee	lia	Chemical extinguishe	ers, foam and sand						
5.2	Special hazards arising from	the substance or	mixture							
	Special hazards		The solution is not in	flammable or oxidisi	ng.					
	Thermal decomposition or pr	oduct combustion	Can produce nitroge	n oxide.						
53	nazards Advice for firefighters									
5.5	Specific firefighting methods		Call fire service. Avoi	id inhaling smoke. S	tay "upwind" of th	e fire.				
	Special protective equipment	for firefighting	Self-contained breath	hing apparatus and a	adequate protectiv	ve clothing.				
SECTION 6	Accidental release measures									
6.1	Personal precautions, protec	tive equipment an	d emergency proced	ures						
			Avoid contact with ey Keep unnecessary p Wear safety glasses	ves, skin and clothing ersonnel away. , chemical resistant g	g. gloves (PVC) and	rubber boots				
62	Environmental precautions									
0.2			Description in feature and a sh						-41	
			Any spill of the liquid In case of accidental	must be cleaned im contamination of dra	nediately. ainage networks o	or water courses, i	nform the local a	uthorities immediately.	ation.	
6.3	Methods and material for cor	tainment and clea	ning up							
			Any spill must be imr water.	mediately cleaned ar	nd deposited in a	clean, labelled cor	ntainer for recove	ry or suitable disposal.	Clean residual was	te with plenty of
6.4	Reference to other sections									
			See section 8 for per	rsonal protective equ	ipment and section	on 13 for the dispo	sal of waste			
SECTION 7	CTION 7 Handling and storage									
7.1	Precautions for safe handling	1								
			Avoid contact with ey Ensure adequate ver Do not eat, drink or s Wash hands after us	ves and skin using th ntilation. moke in work areas.	e protection equi	pment indicated in	section 8.			
7.2	Conditions for safe storage.	ncluding anv inco	mpatibilities							
			Keep away from hea Avoid contamination	t sources. with inflammable ma	aterials. reducing	agents, alkalis and	d metals.			
	Recommended packaging ma	aterials	Reinforced plastic re	cipients, for their pH	value.	3				
7.3	Specific end uses	necific end uses								
			See section 1.2 and	appendices for expo	sure scenarios.					
Note: stabili	ty and reactivity, see section	10								
SECTION 8										
8.1	Control parameters	Si ottobioni								
0.1			Company	CA8	1					
	Exposure limit values		Colleium nitroto	10104 07 5	Not established					
		[Calcium nitrate	10124-37-5	worker					
			oral	Not applicable		8.33 mg/Kg bw/dav				
		DNEL		lation 24.5 mg/m3				6.3 mg/k	ig bw/day	
	Derived from the CSR		dermal	1:	- 3.9 mg/Kg bw/day	,		8.33 mg/l	Kg bw/day	
				l	air	soil	microbiolo-	sediment	-	oral
		DNEC	freeh wotor: 0.45m	/1	an	SUI	gical	seament		Urai
		FNEC	sea water: 0.045 mg intermittent emission	/ L : 4.5 mg / L	Not available	Not available	18 mg / L	Not available		Not relevant

	Calcium Nitrate Solution								
8.2	Exposure controls								
	Hygiene controls		Do not eat, drink or s Wash hands after ha Install showers and y	Do not eat, drink or smoke in storage and handling areas. Wash hands after handling. Install showers and wash basins in storage and handling areas.					
			Install systems that a	avoid projections at s	torage and handl	ing locations.			
	Personal protection measure	es .							
		Eyes	Use homologated se	ecurity glasses or fac	e shield				
		Skin and body	Chemical resistant g	loves (PVC, Neoprer	ne,)				
		Respiratory	Not relevant						
		Thermal	Not relevant						
	Environmental exposure con	trols	See section 6.						
	Advice relating to personal p Choose personal protection	protection is valid equipment suitabl	for high exposure lev e to exposure risks.	vels.					
SECTION 9	Physical and chemical prope	erties							
9.1	Information on basic physica	I and chemical pro	operties						
	Aspect		Liquid						
	Colour		colourless or pale ye	llow					
	Odour		odourless						
	Molecular weight		Not applicable						
	рН		>2 (in water solution	at 10%)					
	Boiling point		Not available						
	Melting point		-10 ºC						
	Flash-point		Not applicable						
	Flammability		Non flammable						
	Explosive properties		Non-explosive						
	Auto-ignition temperature		Not applicable						
	Decomposition temperature		Not available						
	Lower explosive limit		Not applicable						
	Upper explosive limit		Not applicable						
	Density		1 4 ar/am3						
	Vanour pressure at 20 °C		Not available						
	Vapour pressure at 20°C		Not available						
	Partition coefficient n-octano	ol/water	Not applicable						
	Viscosity	, indioi	Not available						
	Water solubility		Soluble						
9.2	Other information		Not available						
SECTION 10	Stability and reactivity								
10.1	Reactivity		Not available						
10.2	Chemical stability		Stable under normal	conditions of storage	e, handling and u	Se			
10.3	Possibility of hazardous read	tions	Not available						
10.4	Conditions to avoid		Avoid contamination	with incompatible m	aterials. Keep aw	ay from heat sources or naked flames for long periods.			
10.5	Incompatible materials		Inflammable materia	ls, reducing agents,	acids, alkalis, chlo	prates, chlorides, chromates, nitrites, permanganate, metal powders and metal-containing			
10.6	Hazardous decomposition p	oduote	substances such as copper, nickel, cobait, zind and associated alloys. Nitrogen oxide can be produced during decomposition						
10.6	nazardous decomposition pr	oddets	Nitrogen oxide can b	e produced during d	lecomposition				
SECTION 11	Toxological information								
11.1	Information on toxological ef	fects							
	Acute toxicity								
	Component	CAS No.	Method	Species	Via	Result			
			OECD 423	rat	oral skin	DL50 >300 - < 2000 mg / Kg pc. Toxic. (ETA)=500 mg / Kg pc. DL50 > 2000 mg / Kg pc. Based on available data. calcium nitrate does not have to be			
	Calcium nitrate	10124-37-5	OECD 402	rat		classified.			
	Skin correction/irritation				respiratory	Not relevant. Low-volatility substance			
	Ocean corrosion/irritation	646 N-	Marthaad	Question	\/:-	Decult			
	Component	CAS NO.	Methoa	Species	Via				
	Calcium nitrate	10124-37-5	OECD 404	mouse	skin	Non-irritant. In the light of available data the classification criteria are not fulfilled.			
	Serious eye damage/irritation	n							
	Component	CAS No.	Method	Species	Via	Result			
	Calcium nitrate	10124-37-5	OECD 405	mouse	eyes	Causes serious eye damage.			
	Respiratory or skin sensitisa	tion							
	Component	CAS No.	Method	Species	Via	Result			
	Calcium nitrate	10124-37-5	OECD 429	mouse	skin	Non-sensitising. In the light of available data the classification criteria are not fulfilled.			
	Germ cell mutagenicity		<u>I</u>		respiratory	ทางเ ลงลแลมเย.			
	Component	CAS No.	Method	Species		Result			
	Calcium nitrate	10124-37-5	OECD 471	bacteria		Non-mutagenic.			
			OECD 476 OECD 473	mammal cells mammal cells		Non-mutagenic. Non-mutagenic.			

				Calcium N	litrate So	lution			
	Carcinogenicity								
	Component	CAS No.	Method	Species	Via	Result			
	Calcium nitrate	10124-37-5			oral respiratory skin	Not applicable. N Not applicable. N Not applicable. N	lon-genotoxic su lon-genotoxic su lon-genotoxic su	bstance. bstance. bstance.	
	Reproductive toxicity	1	1	1		1			
	Component	CAS No.	Method	Species	Via	Result			
	Calcium nitrate	10124-37-5	OECD 422	rat	oral	NOAEL ≥ 1,500 n Not Classified	0 mg /kg pc / day.		
	STOT-single exposure and S	Ire and STOT-repeated exposure							
	Component	CAS No.	Method	Species	Via	Result			
	Calcium nitrate	10124-37-5	OECD 407	rat	respiratory skin	Criteria are not fu Not available. Lo Not available. Not	ng /kg pc / day. i Ifilled. w-volatility subsi ot applicable.	ance	available data the classification
	Aspiration hazard	No known significa	ant effects or critical h	azards	4	1			
SECTION 12	Ecological information	-							
12.1	Toxicity								
12.1	Water toxicity								
	Component	CAS No		Fish		Crustaceans		Algae	
		OAO NO.	Short term	CL50(96h) = 1378	ma / L	EC50 (48h) = 490	0 ma / L	EC50 (10days) = 1700) ma / L
	Calcium nitrate	10124-37-5	Long term	Not necessary		Not necessary	5 mg / 2	Not available	,
			Long term	nornooddary		not nococcary		i lot avallablo	
	Land Toxicity	1	<u> </u>						
	Component	CAS No.	Macroorganisms		Microorganism	Microorganisms		Other organisms	
	Calcium nitrate	10124-37-5	Not necessary		Not necessary	Not necessary Not available			
	Microbiological activity in wa	aste water treatmer CAS No.	nt plants Toxicity for aquatic	: microorganisms					
	Calcium nitrate	10124-37-5	EC50 (180 min) = 18 EC50 (180min) = 10	80 mg / L 100 mg / L					
12.2	Persistence and degradabilit	tv							
	Component	CAS No.	Pe	riod	Degradation ha	alf life			
			Hydrolysis	Non-hydrolisable					
	Calcium nitrate	10124-37-5	Photolysis	Not required	Not required. In	organic substance			
			Biodegradation	Not required					
12.3	Bioaccumulative potential								
	Component	CAS No.	Octanol-water pa (Ko	artition coefficient ow)	Bioconcer (E	tration factor BCF)	Comments		
	Calcium nitrate	10124-37-5	Not applicable. In	organic substance.		-	Low bioaccum	ulative potential	
12.4	Mobility in soil	1							
	Component	CAS No.	Result	<u> </u>					
	Calcium nitrate	10124-37-5	Absorption Sublimation	Low absorption pol Not applicable. Ino	rganic substance	totally dissociated	i into its ions		
12.5	Results of PBT and vPvB as	3T and vPvB assessment							
	Assessment has not been car	ried out given the in	organic nature of calc	ium					
12.6	Other adverse effects								
	Harmless substance for the environment								
SECTION 13	Disposal considerations								
13.1	Waste treatment methods	tomination - Part 1	a aa fartiliat	outhorized	silia :				
	Containers: Emtpy and wash. Manage as harmless waste.								

	Calcium Nitrate Solution							
SECTION 14	Transport Information							
14.1 - 14.6	Regulatory Information	UN Number	Proper shipping name	Class	Packing group	Label	Environmental hazards	Special precautions for users
	Harmless waste for transport	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.7	Transport in bulk according	to Annex II of Marp	ool and the IBC Code	: Not applicable				
SECTION 15	Regulatory information							
15.1	Safety, health and environme	ental regulations/le	gislation specific for	the substance or n	nixture			
	R.D. 261/96 on protection of w Regulation 2003/2003 for fertil Regulation 1907/2006 (REACH Regulation 1272/2008 (CLP) R.D. 506/2013 (fertilizers)	rater from nitrates (E isers H)	Directive 91/676/EC)					
15.2	Chemical Safety Assessment	t						
	Assessment of Chemical Safe	ty carried out for cal	cium nitrate					
SECTION 16	Other information							
	Hazard statements		H302: Harmful if sw H318: Causes seriou	allowed us eye damage				
	Precautionary statements		P102: Keep out of reach of children. P264: Wash hands thoroughly after handling P270: Do not eat, drink or smoke when using this product P280: Wear protective gloves and eye protection P301+P312: IF SWALLOWED: Immediately call a POISON CENTRE or doctor P303: Rinse mouth P305+P351+P338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. P310: Immediately call a POISON CENTER or a doctor.					
	Bibliographical references ar	nd data sources	Assessment of chem	nical safety of calciur	n nitrate			
	Abbreviations and acronyms ELV-DE: Environmental limit value (daily exposure) ELV-ST Environmental limit value (short term) NOAEL: No observable adverse effect level LD50: Lethal dose 50% LC50: Lethal concentration 50% DNEL: Derived no effect level PMEC: Predicted no effect level PNEC: Predicted no effect concentration LOEC: Lowest observed effect concentration NOEC: No observed effect concentration NOEC: No observed adverse effect concentration NOAEC: No observed adverse effect concentration NOAEC: No observed adverse effect concentration							
	Adequate training for workers Obligatory training in occupational risk prevention							
	Date of prior SDS		Version 3 dated 11.0	07.13				
	Modifications made to preser	nt revision	Section 2: Hazard m Adapt to Regulation	odification including 830/2015	indication H318.			
	Exposure scenarios 1,2,3 and	d 4 are attached						

The information contained in this Safety Data Sheet is given in good faith. It is accurate to the best of our knowledge and belief and represents the most up to date information about the product at the time of publication. The information given in this data sheet does not constitute or replace the user's own assessment of workplace risks as required by other health and safety legislation.

Safety Data Sheet Appendices Exposure Scenario 1 1 Tele faceure Scenario 1 1 Tele faceure Scenario 1 2 Bacception 4 software Scenario 1 3 Bacception 4 software Scenario 1 1 Tele faceure Scenario 1 2 Bacception 4 software Scenario 1 3 Bacception 4 software Scenario 1 4 Bacception 4 software Scenario 1 7 Bacception 4 software Scenario 1 8 Bacception 4 software Scenario 1 9 Bacception 4 software Scenario 1 10		Calcium Nitrate	Solution		
Exposure Scenario 1 Image: Scenario 1 1 Image: Scenario 1 Image: Scenario 1 2 Image: Scenario 1 Image: Scenario 1 Image: Scenario 1 3 Image: Scenario 1		Safety Data Sheet	Appendices		
1 The of Exposure Science (ES) Mundature of addum initiat Andrature of addum initiat 2 Description of skinities or processes covered by the exposure science (CC) List of all the use description relied to ES 1 Use addum initiat Covere (CC) Name Covere (CC) 1 Andrature of addum initiat 2 Covere (CC) 1 Andrature of addum initiat 3 Exception (CC) 1 Andrature of addum initiat 4 Description (CC) 1 Andrature of addum initiat 2 Contributing science (CC) 1 Contributing science (CC) 2 Contributing science (CC) 2 Contributing science (CC) 3 Maximitat ad		Exposure Sce	enario 1		
Number of control market 2 Description of controls on generation of the sequence scatter of the se	1	Title of Exposure Scenario (ES)			
2 Bestylen of activities or processes (consend by the appears scanno) 4 Let of all he use descriptors related to E3 1 5/300*** Biol 200***********************************		Manufacture of calcium nitrate			
Let of all he use decemptors related to ES 1 Let of all he use decemptors related to ES 1 Let of all he use decemptors related to ES 1 Here S Let of all he use decemptors related to ES 1 Here S Let of all he use decemptors related to ES 1 Here S Let of all he use decemptors related to ES 1 Here S Let of all he use decemptors related to ES 1 Here S Let of all here S <td< td=""><td>2</td><td>Description of activities or processes covered by the exposure scenario</td><td></td></td<>	2	Description of activities or processes covered by the exposure scenario			
Process of the subtract of th		List of all the use descriptors related to ES 1			
Image: Second processes of the environment and their corresponding Environmental Release Class (ERC) Image: An extended or disation relation of their corresponding Process Category (PROC) Image: An extended or content of their corresponding Process Category (PROC) Image: An extended or content of their corresponding Process Category (PROC) Image: An extended or content of their corresponding Process Category (PROC) Image: An extended or content of their corresponding Process Category (PROC) Image: An extended or content of their corresponding Process Category (PROC) Image: An extended or content of their corresponding Process Category (PROC) Image: An extended or content of their corresponding Process Category (PROC) Image: An extended or content of their corresponding Process Category (PROC) Image: An extended or content of their corresponding Process Category (PROC) Image: An extended or content of their corresponding Process Category (PROC) Image: An extended or content of their corresponding Process Category (PROC) Image: An extended or content of their corresponding Process Category (PROC) Image: An extended or content of their corresponding Process Category (PROC) Image: An extended or content of their content of their corresponding Process Category (PROC) Image: An extended or content of their content content of their content of their content of thei		SU 3/3/9 * PROC 1/2/3/8b/14/15 ERC 1			
Limite of continuing scenario is for the worker and their corresponding Process Catagory (PROC) 1. Use in reclosed, continuous processes with occasional controlled seposure (PROC 2) 3. Use in closed, continuous processes with occasional controlled seposure (PROC 1) 4. The observation of the observation observation of the observation of the observation of		Name/s of contributing scenario/s related to the environment and their corresponding Environme	ental Release Class (ERC)		
 I. be in maload processes, no likelihood of deposure (PROC 1) I. be in maload processes, no likelihood of compoure (PROC 2) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processes) Per in cload a bind processes (prime of the processe) Per in cload a bind processes (prime of the proc		Name/s of contributing scenario/s for the worker and their corresponding Process Category (PR	DC)		
Agency Guidance Document, Chapter R12: Use descriptor systems: SU 3 (Muthatrian mundacturg: Use of substances as such or in preparations in industrial facilities) / 21 Contributing scenario (1) controlling environmental exposure for manufacture of clackum nitrate is being manufacture (ERC 1). indicence 1 duscribes emissions into the environment hat might take place while clackum nitrate is being manufacture (ERC 1). is this substance does fulli ortenia for classification as hazardous to the environment in the assessment has not been carried out for this substance and therefore the conditions that affect the environment is environmental risk assessment has not been carried out for this substance and therefore the conditions that affect the environment is environmental environment is environmental risk assessment has not been carried out for this substance and therefore the conditions that affect the environment is environmental environment is environmental environment is environmental environment is environmental environmental environmental environment is environmental envinonmental envinonmental environmental environmental environmental e		1. Use in enclosed processes, no likelihood of exposure (PROC 1) 2. Use in closed, continuous processes with occasional controlled exposure (PROC 2) 3. Use in closed batch processes (synthesis or formulation) (PROC 3) 4. Transfer of substances or preparations (charging/discharging) from/to vessels/large containers at de 6. Production of mixtures or articles by tabletting, compression, extrusion, pelletisation (PROC 14) 7. Use as laboratory reagent (PROC 15)	adicated facilities (PROC 8b)		
21 Contributing senario (1) controlling environmental exposure for manufacture of calcium nitrate (ES1) Environmental exposure due to manufacture of calcium nitrate (ES1) Environmental exposure due to manufacture of calcium nitrate (ES1) Environmental exposure due to manufacture of calcium nitrate (ES1) Statis substance does full orteris for classification as hazardous to the environment, the environmental field sessesment has not been carried out for this substance and therefore the conditions that affect the invironmental environment are not included during this use. 22 Contributing senario (2) controlling exposure of workers for manufacture of the substance, including handling, storage and quality controls. will be relevant processes for the contributory scenarios identified by the PROC codes in point 1 of this substance. Sold with low dust formation index Liquid Liquid Liquid Name accessing and duation of use or exposure > 4 hours a day. Name factors not influenced by fak mangement Not relevant Not relevant Codicium nitrate is manufacture of the substance. Sechical conditions and masures at process livel (source) to prevent release Not relevant Interpretential exposure of infit releases. Not relevant Sechical conditions and masures to proceent or infit releases. Not relevant Sechical conditions and masures to proceent orelinit releases.		* Agency Guidance Document, Chapter R.12: Use descriptor systems: SU 3 (Industrial manufacturing: SU 8 (Manufacture of bulk, large scale chemicals) / SU 9 (Manufacture of fine chemicals)	Use of substances as such or in preparations in industrial facilities) /		
invoromental expoure due to manufacture of calcium nitrate backin 2.1 describes emissions into the environment that might take place while calcium nitrate is being manufactured (ERC 1). this substance das fulls drain for classification as hazardous to the environment, the environmental risk assessment has not been carried out for this substance and therefore the conditions that affect the environment are not included duing this use. 2.2 Contributing scenario (2) controlling exposure of workers for manufacture of the substance, including handling, storage and quality controls 2.2 Contributing scenario (2) controlling exposure of workers for manufacture of the substance, including handling, storage and quality controls 2.2 Contributing scenario (2) controlling exposure of workers for manufacture of the substance, including handling, storage and quality controls 2.4 describes potential exposure of workers from manufacture of the substance, including handling, storage and quality controls. 3. If the relevant boxes for the contributing scenario (2). 3. Vordet characteristics 3. Solid with low dust formation index 4. Liquid 3. Unautifies used 3. Not relevant 3. Not relevant 3. Controlling assessment 4. Advantate on manufacture of use or exposure 3. Condum nitrate is manufactured in enclosed environments 5. Solid with low dust formation index 5. Condum nitrate is manufactured in enclosed environments 5. Condum	2.1	Contributing scenario (1) controlling environmental exposure for manufacture of calcium nitrate	(ES1)		
laction 2.1 describes emissions into the environment that might take place while calcium nitrate is being manufactured (ERC 1). to this substance, dees full criteria for classification as hazardous to the environment, the environmental risk assessment has not been carried out for this substance and therefore the conditions that affect the invitonment at on for induded during this use. 2 contributing scenario (2) controlling exposure of workers for manufacture of the substance, including handling, storage and quality controls 2 describes potential exposure of workers from manufacture of the substance, including handling, storage and quality controls 2 describes potential exposure of workers from manufacture of the substance, including handling, storage and quality controls 2 describes potential exposure of workers from manufacture of the substance, including handling, storage and quality controls 2 describes potential exposure of workers from manufacture of the substance, including handling, storage and quality controls 3 describes of the contributing scenario (2). 3 describes of the contributing scenario (2). 4 do due to manufacture of the substance due to exposure 3 describes of the contributing scenario (2). 4 do due to exposure 4 do ado on exposure 5 do due to ex	invironmer	tal exposure due to manufacture of calcium nitrate			
s bis buscance does Luff or this substance and herefore the conditions that affect the invironment ar not included during this use. 2.2 Controlling exposure of workers for manufacture of the substance, including handling, storage and quality controls 2.3 Controlling exposure of workers for manufacture of the substance, including handling, storage and quality controls 2.4 Controlling exposure of workers for manufacture of the substance, including handling, storage and quality controls 2.5 Controlling exposure of workers for manufacture of the substance, including handling, storage and quality controls 2.6 Controlling exposure of workers for manufacture of the substance, including handling, storage and quality controls 3.6 Solid with low dust formation index 4.1 Liquid 4.2 Liquid 4.2 Liquid 4.3 Not relevant 7.4 Controlling exposure of worker exposure 2.6 Solid with low dust formation index 4.1 Liquid 4.2 Liquid 4.3 Not relevant 7.4 Controlling exposure of worker exposure 2.6 Controlling exposure 3.7 Controlling dispersion of the source to workers 3.7 Controlling exposure of link relevant 3.8 Controlling exposure on worker exposure 3.8 Controlling exposure on worker exposure 3.8 Controlling exposure on other exposure 3.8 Controlling exposure on exposure 3.8 Controlling exposure on relevant 3.8 Controlling exposure on relevant relevant 3.8 Controlling exposure on relevant 3.8 Controlling exposure on relevant exposure 3.8 Controlling exposure on relevant 3.8 Controlling expos	Section 2.1	describes emissions into the environment that might take place while calcium nitrate is being manufacture	ed (ERC 1).		
20 Controluting scenario (2) controlling exposure of workers for manufacture of the substance, including handling, storage and quality controls. Section 2.2 describes potential exposure of workers from manufacture of the substance, including handling, storage and quality controls. NI the relevant processes for the contributory scenarios identified by the PROC codes in point 1 of this scenario (PROC 1/2/3/Bb/14/15) have the same operating conditions and risk management measures for scenario. Product characteristics Solid with low dust formation index Liquid Quantities used Not relevant Product characteristics Solid with low dust formation index Liquid Quantities used Not relevant There operational conditions that management Not relevant There operational conditions and measures at process level (source) to prevent release Not relevant Control worker exposure Code ventilation conditions Product characteristics Solid with low dust formation index Liquid Conditions and measures to prevease level (source) to prevent release Not relevant Control worker exposure Code ventilation conditions Solid with index conditions and measures at process level (source) to prevent release Not relevant Solid workins and measures for prevent release Not relevant Solid workins and measures difference to its sourc	As this sub anvironmen	stance does fulfil criteria for classification as hazardous to the environment, the environmental risk a t are not included during this use.	ssessment has not been carried out for this substance and therefore the conditions that affect the		
Section 2.2 describes potential exposure of workers from manufacture of the substance, including handling, storage and quality controls. All the relevant processes for the contributory scenarios identified by the PROC codes in point 1 of this scenario (PROC 1/2/3/8b/14/15) have the same operating conditions and risk management measures for breasonel. Product characteristics Solid with low dust formation index Liquid Quantities used Not relevant Fequency and duration of use or exposure A flow is a day turnan factors not influenced by risk management Not relevant Calcium nitrate is manufacture of use or exposure Calcium nitrate is manufactured in enclosed environments rechnical conditions and measures tor controlling dispersion of the source to workers 2. Good wanifation conditions 2 stimulation of exposure and reference to its source Not relevant 2 stimulation of exposure and reference to its source Not relevant 2 stimulation of exposure and reference to its source Not relevant 2 stimulation of exposure and reference to its source Not relevant 2 stimulation of exposure and reference to its source Not relevant 2 stimulation of exposure and reference to its source Not relevant 2 stimulation of exposure and reference to its source Not relevant 3 Estimation of exposure and reference to its sour	2.2	Contributing scenario (2) controlling exposure of workers for manufacture of the substance, incl	uding handling, storage and quality controls		
All the relevant processes for the contributory scenarios identified by the PROC codes in point 1 of this scenario (PROC 1/2/3/8b/14/15) have the same operating conditions and risk management measures for become to consequently they are all covered by just one contributing scenario (2). Product haracteristics Produ	Section 2.2	describes potential exposure of workers from manufacture of the substance, including handling, storage	and quality controls.		
product characteristics Solid with low dust formation index Liquid Quantities used Not relevant requency and duration of use or exposure > 4 hours a day Wman factors not influenced by risk management Not relevant Other operational conditions that have an impact on worker exposure Calcium nitrate is manufactured in enclosed environments rechnical conditions and measures at process level (source) to prevent release Not relevant rechnical conditions and measures for controlling dispersion of the source to workers 1. Adequate containment of the substance 2 Good ventilation conditions	All the rele	vant processes for the contributory scenarios identified by the PROC codes in point 1 of this scena Consequently they are all covered by just one contributing scenario (2).	rio (PROC 1/2/3/8b/14/15) have the same operating conditions and risk management measures for		
Duantities used Not relevant requency and duration of use or exposure > 4 hours a day Uman factors not influenced by risk management Not relevant Other operational conditions that have an impact on worker exposure Calcium nitrate is manufactured in enclosed environments Technical conditions and measures at process level (source) to prevent release Not relevant Technical conditions and measures for controlling dispersion of the source to workers 1 Adequate containment of the substance 2 Good ventilation conditions 2 Good ventilation conditions Organisational measures to prevent or limit releases, dispersion and exposure Not relevant Organisational measures for personal protection, hygiene and health evaluation Use safety glasses 3 Estimation of exposure and reference to its source Information for contributing scenario 1 (environmental exposure): oe environmental assessment was completed because the substance does not fulfil criteria for classification as hazardous for the environment and therefore there is no additional assessment of environmental exposure. Information for contributing scenario 2 (exposure for personal): Valiatative assessment has been included that concludes that this use is safe for workers. The main toxicological effect of this substance is eye irritation (local parameter), for which a DNEL value cannot be estimated, because there is no do	Product ch	aracteristics	Solid with low dust formation index Liquid		
Frequency and duration of use or exposure > 4 hours a day Human factors not influenced by risk management Not relevant Other operational conditions that have an impact on worker exposure Calcium nitrate is manufactured in enclosed environments Technical conditions and measures at process level (source) to prevent release Not relevant Technical conditions and measures for controlling dispersion of the source to workers 1. Adequate containment of the substance 2. Good ventilation conditions 2. Good ventilation conditions Organisational measures for personal protection, hygiene and health evaluation Use safety glasses 3 Estimation of exposure and reference to its source Information for contributing scenario 1 (environmental exposure): Not relevant Not erlevant Use safety glasses Information for contributing scenario 2 (exposure for personnel): Not relevant A qualitative assessment has been included that concludes that this use is safe for workers. The main toxicological effect of this substance is eye initiation (local parameter), for which a DNEL value cannot be estimated, because there is no dose-response information available. Although this subtance is to vior an assessment of exposure is not clevant for this scenario, it is not considered probable and therefore a value for cral exposure was not estimated. The substance did not show systemic effects in studies on repeated doses (chronic), made with dose shat are so hig	Quantities	used	Not relevant		
tumn factor Not relevant Other outlines in functed by risk management Calcium nitrate is manufactured in enclosed environments Sechnical control Calcium nitrate is manufactured in enclosed environments Sechnical control Not relevant Sechnical control 1. Adequate contrainment of the substance 2. Good ventilation conditions Organisation 1. Adequate contrainment of the substance 2. Good ventilation conditions Organisation Not relevant Outlines and resources for personal protection, hygiene and health evaluation Use safety glasses Outlines and of exposure and reference to its source Use safety glasses Information control Ventervant Not relevant Use safety glasses Ventervant Not relevant Use safety glasses Ventervant Not relevant Use safety glasses Ventervant Not relevant Ventervant Vent	requency	and duration of use or exposure	> 4 hours a day		
Charle operational conditions that have an impact on worker exposure Calcium nitrate is manufactured in enclosed environments Technical conditions and measures at process level (source) to prevent release Not relevant 1 - Adequate containment of the substance 2. Good ventilation conditions Organisational measures to prevent or limit releases, dispersion and exposure Not relevant 2 conditions and measures for personal protection, hygiene and health evaluation Use safety glasses 3 attration of exposure and reference to its source Intervention of contributing scenario 1 (environmental exposure): No environmental assessment was completed because the substance does not fulfil criteria for classification as hazardous for the environment and therefore there is no additional assessment of environmental exposure. Information for contributing scenario 2 (exposure for personnel): A qualitative assessment has been included that concludes that this use is safe for workers. A qualitative assessment has been included that concludes that this use is safe for workers. Is not devision as not elevant for this scenario, it is not considered probable and therefore a value for oral exposure was not estimated. The substance if not show systemic effects in studies on repeated doses (chronic), made with doses that are so high that that the workers are not going to be exposed to them (see relevant DNEL: section 8 FDS), it was also considered unnecessary to carry out an assessment or punctified with doses that are so high that that the workers are not going to be exposed to them (see relevant DNEL: section 8 FDS), it was	luman fac	tors not influenced by risk management	Not relevant		
Fechnical conditions and measures at process level (source) to prevent release Not relevant Fechnical conditions and measures to prevent or limit release, dispersion of the source to workers 1. Adequate containment of the substance Organisational measures to prevent or limit releases, dispersion and exposure Not relevant Conditions and measures to prevent or limit releases, dispersion and exposure Not relevant 3 Estimation of exposure and reference to its source Not relevant 3 environmental exposure): Vertice and reference to its source Not contributing scenario 1 (environmental exposure): Not contributing scenario 2 (exposure for personnel): A qualitative assessment was completed because the substance does not fulfil criteria for classification as hazardous for the environment and therefore there is no additional assessment of environmental exposure. Information for contributing scenario 2 (exposure for personnel): A qualitative assessment has been included that concludes that this use is safe for workers. Phe main toxicological effect of this substance is eye irritation (local parameter), for which a DNEL value cannot be estimated, because there is no dose-response information available. Although this substance is to xide on repeated doses (chronic), made with doses that are so high that that the workers are not going to be exposed to them (see relevant DNEL: section 8 FDS), it was also considered probable and therefore avalue for oral exposure was not estimated. The substance did not show systemic effects in studies on repeated do	Other oper	ational conditions that have an impact on worker exposure	Calcium nitrate is manufactured in enclosed environments		
Fechnical conditions and measures for controlling dispersion of the source to workers 1 Adequite containment of the substance Organisation is measures to prevent or limit releases, dispersion and exposure Not relevant Conditions is measures for personal protection, hygiene and health evaluation Use safety glasses 3 Estimation of exposure and reference to its source Its assessment was completed because the substance does not fulfil criteria for classification as hazardous for the environment and therefore there is no additional assessment of environmental exposure. Information for contributing scenario 2 (exposure for personal): A qualitative assessment has been included that concludes that this use is safe for workers. The main toxicological effect of this substance is eye irritation (local parameter), for which a DNEL value cannot be estimated, because there is no dose-response information available. Although this substance is to kin or exposure is not relevant for this scenario, it is not considered probable and therefore a value for oral exposure was not estimated. The substance did not show systemic effects in studies on repeated doses (chronic), made with doses that are so high that that the workers are not going to be exposed to them (see relevant DNEL: section 8 FDS), it was also considered unnecessary to carry out an assessment of exposure expansion. 4 Guidance for intermediate users to assess if they working within the limits set by the ES 4/2 Guidance for intermediate users to assess if they working within the limits set by the ES 1 5 Good practice advice in addition	Fechnical of	conditions and measures at process level (source) to prevent release	Not relevant		
Organisation measures to prevent or limit releases, dispersion and exposure Not relevant Conditions measures for personal protection, hygiene and health evaluation Use safety glasses 3 Estimation of exposure and reference to its source Use safety glasses Information for contributing scenario 1 (environmental exposure): No No environmental assessment was completed because the substance does not fulfil criteria for classification as hazardous for the environment and therefore there is no additional assessment of environmental exposure. Information for contributing scenario 2 (exposure for personnel): A A qualitative assessment has been included that concludes that this use is safe for workers. The main toxicological effect of this substance is eye irritation (local parameter), for which a DNEL value cannot be estimated, because there is no dose-response information available. Although this substance is toxic orally, his route of exposure is not relevant for this scenario, it is not considered probable and therefore a value for oral exposure was not estimated. The substance did not show systemic effects in studies on repeated doses (chronic), made with doses that are so high that that the workers are not going to be exposed to them (see relevant DNEL: section 8 FDS), it was also considered unnecessary to carry out an assessment of exposure risk. 4 Guidance for intermediate users to assess if they working within the limits set by the ES action is a madement measures apart from the ones mentioned above in the contributing scenarios (2.1, 2.2) are not required to guarantee sa	Technical of	conditions and measures for controlling dispersion of the source to workers	 Adequate containment of the substance Good ventilation conditions 		
3 Estimation of exposure and reference to its source Information for contributing scenario 1 (environmental exposure): No environmental assessment was completed because the substance does not fulfil criteria for classification as hazardous for the environment and therefore there is no additional assessment of environmental exposure. Information for contributing scenario 2 (exposure for personnel): A qualitative assessment has been included that concludes that this use is safe for workers. The main toxicological effect of this substance is eye irritation (local parameter), for which a DNEL value cannot be estimated, because there is no dose-response information available. Although this substance is toxic origily, this route of exposure is not relevant for this scenario, it is not considered probable and therefore a value for oral exposure was not estimated. The substance did not show systemic effects in studies on repeated doses (chronic), made with doses that are so high that that the workers are not going to be exposed to them (see relevant DNEL: section 8 FDS), it was also considered unnecessary to carry out an assessment of quantitative risks. 4 Guidance for intermediate users to assess if they working within the limits set by the ES Additional risk management measures apart from the ones mentioned above in the contributing scenarios (2.1, 2.2) are not required to guarantee safety during this use and thus work within the limits of the ES 1 exposure scenario. 5 Good practice advice in addition to that included in the Chemical Safety Assessment (CSA) required by REACH. Measures not subject to art. 37 (4) REACH	Organisatio	onal measures to prevent or limit releases, dispersion and exposure	Not relevant		
3 Extination of exposure and reference to its source Information for contributing scenario 1 (environmental exposure): No environmental assessment was completed because the substance does not fulfil criteria for classification as hazardous for the environment and therefore there is no additional assessment of environmental exposure. Information for contributing scenario 2 (exposure for personnel): A qualitative assessment has been included that concludes that this use is safe for workers. The main toxicological effect of this substance is eye irritation (local parameter), for which a DNEL value cannot be estimated, because there is no dose-response information available. Although this substance is toxic doses (chronic), made with doses that are so high that that the workers are not going to be exposed to them (see relevant DNEL: section 8 FDS), it was also considered unnecessary to carry out an assessment of quantitative risks. 4 Guidance for intermediate users to assess if they working within the limits set by the ES Additional risk management measures apart from the ones mentioned above in the contributing scenarios (2.1, 2.2) are not required to guarantee safety during this use and thus work within the limits of the ES 1 exposure scenario. 5 Good practice advice in addition to that included in the Chemical Safety Assessment (CSA) required by REACH. Measures not subject to art. 37 (4) REACH	2	Estimation of exposure and reference to its source	Use salety glasses		
No environmental assessment was completed because the substance does not fulfil criteria for classification as hazardous for the environment and therefore there is no additional assessment of environmental exposure. Information for contributing scenario 2 (exposure for personnel): A qualitative assessment has been included that concludes that this use is safe for workers. The main toxicological effect of this substance is eye irritation (local parameter), for which a DNEL value cannot be estimated, because there is no dose-response information available. Although this substance is toxic orrally, this route of exposure is not relevant for this scenario, it is not considered probable and therefore a value for oral exposure was not estimated. The substance did not show systemic effects in studies on repeated toses (chronic), made with doses that are so high that that the workers are not going to be exposed to them (see relevant DNEL: section 8 FDS), it was also considered unnecessary to carry out an assessment of quantitative risks. 4 Cuidance for intermediate users to assess if they working within the limits set by the ES Additional risk management measures apart from the ones mentioned above in the contributing scenarios (2.1, 2.2) are not required to guarantee safety during this use and thus work within the limits of the ES 1 xposure scenario. 5 Good practice advice in addition to that included in the Chemical Safety Assessment (CSA) required by REACH. Measures not subject to art. 37 (4) REACH	Jufermetier				
No environmental assessment was completed because the substance does not fulfil criteria for classification as hazardous for the environment and therefore there is no additional assessment of environmental exposure. Information for contributing scenario 2 (exposure for personnel): A qualitative assessment has been included that concludes that this use is safe for workers. The main toxicological effect of this substance is eye irritation (local parameter), for which a DNEL value cannot be estimated, because there is no dose-response information available. Although this substance is toxic orally, this route of exposure is not relevant for this scenario, it is not considered probable and therefore a value for oral exposure was not estimated. The substance did not show systemic effects in studies on repeated doses (chronic), made with doses that are so high that the workers are not going to be exposed to them (see relevant DNEL: section 8 FDS), it was also considered unnecessary to carry out an assessment of quantitative risks. 4 Guidance for intermediate users to assess if they working within the limits set by the ES Additional risk management measures apart from the ones mentioned above in the contributing scenarios (2.1, 2.2) are not required to guarantee safety during this use and thus work within the limits of the ES apposure scenario. 5 Good practice advice in addition to that included in the Chemical Safety Assessment (CSA) required by REACH. Measures not subject to art. 37 (4) REACH	mormation	nor contributing scenario i (environmental exposure):			
Information for contributing scenario 2 (exposure for personnel): A qualitative assessment has been included that concludes that this use is safe for workers. The main toxicological effect of this substance is eye irritation (local parameter), for which a DNEL value cannot be estimated, because there is no dose-response information available. Although this substance is toxic orally, this route of exposure is not relevant for this scenario, it is not considered probable and therefore a value for oral exposure was not estimated. The substance did not show systemic effects in studies on repeated doses (chronic), made with doses that are so high that that the workers are not going to be exposed to them (see relevant DNEL: section 8 FDS), it was also considered unnecessary to carry out an assessment of quantitative risks. 4 Guidance for intermediate users to assess if they working within the limits set by the ES Additional risk management measures apart from the ones mentioned above in the contributing scenarios (2.1, 2.2) are not required to guarantee safety during this use and thus work within the limits of the ES 1 exposure scenario. 5 Good practice advice in addition to that included in the Chemical Safety Assessment (CSA) required by REACH. Measures not subject to art. 37 (4) REACH	No environr	nental assessment was completed because the substance does not fulfil criteria for classification as haza	ardous for the environment and therefore there is no additional assessment of environmental exposure.		
A qualitative assessment has been included that concludes that this use is safe for workers. The main toxicological effect of this substance is eye irritation (local parameter), for which a DNEL value cannot be estimated, because there is no dose-response information available. Although this substance is toxic orally, this route of exposure is not relevant for this scenario, it is not considered probable and therefore a value for oral exposure was not estimated. The substance did not show systemic effects in studies on repeated doses (chronic), made with doses that are so high that that the workers are not going to be exposed to them (see relevant DNEL: section 8 FDS), it was also considered unnecessary to carry out an assessment of quantitative risks. 4 Guidance for intermediate users to assess if they working within the limits set by the ES Additional risk management measures apart from the ones mentioned above in the contributing scenarios (2.1, 2.2) are not required to guarantee safety during this use and thus work within the limits of the ES 1 exposure scenario. 5 Good practice advice in addition to that included in the Chemical Safety Assessment (CSA) required by REACH. Measures not subject to art. 37 (4) REACH	Information for contributing scenario 2 (exposure for personnel):				
The main toxicological effect of this substance is eye irritation (local parameter), for which a DNEL value cannot be estimated, because there is no dose-response information available. Although this substance is toxic orally, this route of exposure is not relevant for this scenario, it is not considered probable and therefore a value for oral exposure was not estimated. The substance did not show systemic effects in studies on repeated doses (chronic), made with doses that are so high that that the workers are not going to be exposed to them (see relevant DNEL: section 8 FDS), it was also considered unnecessary to carry out an assessment of quantitative risks.	A qualitative assessment has been included that concludes that this use is safe for workers.				
Guidance for intermediate users to assess if they working within the limits set by the ES Additional risk management measures apart from the ones mentioned above in the contributing scenarios (2.1, 2.2) are not required to guarantee safety during this use and thus work within the limits of the ES 1 copyoure scenario. Good practice advice in addition to that included in the Chemical Safety Assessment (CSA) required by REACH. Measures not subject to art. 37 (4) REACH	The main toxicological effect of this substance is eye irritation (local parameter), for which a DNEL value cannot be estimated, because there is no dose-response information available. Although this substance is toxic orally, this route of exposure is not relevant for this scenario, it is not considered probable and therefore a value for oral exposure was not estimated. The substance did not show systemic effects in studies on repeated doses (chronic), made with doses that are so high that that the workers are not going to be exposed to them (see relevant DNEL: section 8 FDS), it was also considered unnecessary to carry out an assessment of quantitative risks.				
Additional risk management measures apart from the ones mentioned above in the contributing scenarios (2.1, 2.2) are not required to guarantee safety during this use and thus work within the limits of the ES 1 5 Good practice advice in addition to that included in the Chemical Safety Assessment (CSA) required by REACH. Measures not subject to art. 37 (4) REACH	4	4 Guidance for intermediate users to assess if they working within the limits set by the ES			
5 Good practice advice in addition to that included in the Chemical Safety Assessment (CSA) required by REACH. Measures not subject to art. 37 (4) REACH	Additional risk management measures apart from the ones mentioned above in the contributing scenarios (2.1, 2.2) are not required to guarantee safety during this use and thus work within the limits of the ES 1 exposure scenario.				
	5	Good practice advice in addition to that included in the Chemical Safety Assessment (CSA) requi	red by REACH. Measures not subject to art. 37 (4) REACH		
		some in the state substation			

Minimise the number of exposed personnel
 Segregate the releasing processes
 Utilise effective contamination extraction systems
 Cood ventilation conditions
 Minimise manual handling
 Avoid contact with contaminated objects and instruments
 Regularly clean the work area and equipment
 Supervise the area to check that risk management measures are being applied
 Train personnel for good practices
 Keep standard personal hygiene conditions

	Calcium Nitrate Solution					
	Safety Data Sheet Appendices					
1	Title of Exposure Scenario (ES)					
	Industrial use of calcium nitrate for formulating mixtures, as intermediate substance and for end use by industry					
2	Description of activities or processes covered by the exposure scenario					
	SU 3/10 *					
	PC0 (K35000)/4/9a/11/12/14/16/20/21/34/35/37/39 * PROC 1/2/3/4/5/7/8a/8b/9/10/13/14/15					
	ERC 2/4/5/6a/6b/6d/7					
	Name/s or contributing scenario/s related to the environment and their corresponding Environmental Release Class (ERG 1. Formulation of preparations (ERC 2)	<i>;</i>)				
	2. Industrial use of processing aids in processes and products, not becoming part of articles (ERC 4)					
	4. Industrial use resulting in manufacture of another substance (use of intermediates) (ERC 6a)					
	 Industrial use of reactive processing aids (ERC 6b) Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers (ERC 6d) 					
	7. Industrial use of substances in closed systems (ERC 7)					
	Name/s of contributing scenario/s for the worker and their corresponding Process Category (PROC)					
	2. Use in closed, continuous processes with occasional controlled exposure (PROC 2)					
	 Use in closed batch processes (synthesis or formulation) (PROC 3) Use in batch and other processes (synthesis) where opportunity for exposure arises (PROC 4) 					
	 Mixing or blending in batch processes (multistage and/or significant contact) (PROC 5) Industrial spraving (PROC 7) 					
	7. Transfer of substances or preparations (charging/discharging) from/to vessels/large containers at non-dedicated facilities (PR	OC 8a)				
	 transfer of substances of preparations (charging/discharging) from/to vessels/arge containers at dedicated facilities (PROC Transfer of substances or preparations into small containers (dedicated filling line, including weighing) (PROC 9) 	50)				
	10. Roller application or brushing (PROC 10) 11. Treatment of articles by dipping and pouring (PROC 13)					
	12. Production of mixtures or articles by tabletting, compression, extrusion, pelletisation (PROC 14)					
	* Agency Guidance Document. Chapter R 12: Use descriptor systems: SU 3 (Industrial manufacturing: Use of substances as s	such or in preparations in industrial facilities) / SU 10 (Formulation (mixing) of				
	preparations and/or repackaging (without including alloys)).	(himners) / DC 11 (Evaluations) / DC 12 (Eartilizars) / DC 14 (Matal autora				
	treatment products, including galvanic and electroplating products) / PC 9a (Coalings and paints, milets, puties	regulators, flocculants, precipitants, neutralisation agents, other unspecific).				
	PC 21 (Laboratory chemicals) / PC 34 (Textile dyes, finishing and impregnating products) / PC 35 (Washing and cleaning produce PC 39 (Cosmetics, personal care).	icts (including solvent based products) / PC 37 (Water treatment chemicals) /				
2.1	Contributing scenario (1) controlling environmental exposure for formulating preparations and industrial use as intermed	liate substance (ES 2)				
Environmer	tal exposure due to formulation of preparations and industrial use of calcium nitrate as intermediate substance					
Section 2.1	describes emissions into the environment that might take place during the formulation of preparations (ERC 2), industrial use of p	rocessing aids in processes and products, not becoming part of articles (ERC				
 4), industria industrial us 	I use resulting in inclusion into or onto a matrix (ERC 5), industrial use resulting in manufacture of another substance (use of in e of process regulators for polymerisation process in production of resins, rubbers, polymers (ERC 6d) and the industrial use of su	ntermediates) (ERC 6a), industrial use of reactive processing aids (ERC 6b) bstances in closed systems (ERC 7)				
As this sub environmer	stance does fulfil criteria for classification as hazardous to the environment, the environmental risk assessment has not beer t are not included during this use.	carried out for this substance and therefore the conditions that affect the				
2.2	Contributing scenario (2) controlling exposure of workers that corresponds to the industrial use of calcium nitrate for workers in industrial facilities	or formulating preparations, as intermediate substance and end use by				
All the rele	vant processes for this scenario identified by the PROC codes in point 1 of this scenario (PROC 1/2/3/4/5/7/8a/8b/9/10/13/14/	5) have the same operating conditions and risk management measures for				
personnel.		Solid with low dust formation index				
Product ch	aracteristics	Liquid				
Quantities	lieod	Substance concentration > 25%				
Frequency	and duration of use or exposure	> 4 hours a day				
Human fac	tors not influenced by risk management	Not relevant				
Other open	ational conditions that have an impact on worker exposure	Used in enclosed spaces				
Technical		1 Adequate containment of the substance				
2. Good ventilation conditions						
Conditions	Conditions and measures for personal protection, hygiene and health evaluation Use safety glasses					
3	Estimation of exposure and reference to its source					
Information	Information for contributing scenario 1 (environmental exposure):					
No environmental assessment was completed because the substance does not fulfil criteria for classification as hazardous for the environment and therefore there is no additional assessment of environmental exposure.						
Information for contributing scenario 2 (exposure for personnel):						
A qualitative assessment has been included that concludes that this use is safe for workers. The main toxicological effect of this substance is eve irritation (local parameter), for which a DNEL value cannot be estimated, because there is no dose-response information available. Although this substance is toxic						
orally, this route of exposure is not relevant for this scenario, it is not considered probable and therefore a value for oral exposure was not estimated. The substance did not show systemic effects in studies on repeated						
quantitative	doses (chronic), made with doses that are so high that that the workers are not going to be exposed to them (see relevant DNEL: section 8 FDS), it was also considered unnecessary to carry out an assessment o quantitative risks.					
4	Guidance for intermediate users to assess if they working within the limits set by the ES					
Additional r	isk management measures apart from the ones mentioned above in the contributing scenarios (2.1, 2.2) are not required to g	uarantee safety during this use and thus work within the limits of the ES 2				
exposure s						
5	5 Good practice advice in addition to that included in the Chemical Safety Assessment (CSA) required by REACH. Measures not subject to art. 37 (4) REACH					

Adequate containment of the substance
 Minimise the number of exposed personnel
 Segregate the releasing processes
 Utilise effective contamination extraction systems
 Good ventilation conditions

Calcium Nitrate Solution

- winimise manuan nanoung - Avoid contact with contaminated objects and instruments - Regularly clean the work area and equipment - Supervise the area to check that risk management measures are being applied - Train personnel for good practices - Keep standard personal hygiene conditions

	Calcium Nitrate Solu	ution				
	Safety Data Sheet Appendices					
	Exposure Scenar	io 3				
1	Title of Exposure Scenario (ES)					
	Professional use of calcium nitrate for formulation of preparations and end use by professionals					
2	Description of activities or processes covered by the exposure scenario					
	SU 22* PC4/12/14/16/20/21/35/37 *					
	ERC8a/8b/8c/8d/8e/9a/9b					
	Name/s of contributing scenario/s related to the environment and their corresponding Environmental Rel	ease Class (ERC)				
	 Wide dispersive indoor use of processing aids in open systems (ERC 8b) Wide dispersive indoor use of reactive substances in open systems (ERC 8c) Wide dispersive outdoor use of reactive substances in open systems (ERC 8d) Wide dispersive outdoor use of reactive substances in open systems (ERC 8d) Wide dispersive indoor use of reactive substances in open systems (ERC 8d) Wide dispersive indoor use of substances in open systems (ERC 8e) Wide dispersive indoor use of substances in open systems (ERC 8e) Wide dispersive indoor use of substances in closed systems (ERC 8e) 					
	Name/s of contributing scenario/s for the worker and their corresponding Process Category (PROC)					
	1. Use in enclosed processes, no likelihood of exposure (PROC 1) 2. Use in closed, continuous processes with occasional controlled exposure (PROC 2) 3. Mixing or blending in batch processes (multistage and/or significant contact) (PROC 5) 4. Transfer of substances or preparations (charging/discharging) from/to vessels/large containers at non-dedicated facilities (PROC 8a) 5. Transfer of substances or preparations (charging/discharging) from/to vessels/large containers at dedicated facilities (PROC 8b) 6. Transfer of substances or preparations into small containers (dedicated filling line, including weighing) (PROC 9) 7. Roller application or brushing (PROC 10) 8. Treatment of articles by dipping and pouring (PROC 13) 9. Use as laboratory reagent (PROC 15)					
	* Agency Guidance Document, Chapter R.12: Use descriptor systems: SU 22 (Professional uses: Public domai PC 4 (Anti-freeze and de-icing products) / PC 12 (Fertilizers) / PC 14 (Metal surface treatment products, includ as ph-regulators, flocculants, precipitants, neutralisation agents, other unspecific) / PC 21 (Laboratory chemical treatment chemicals) / PC 39 (Cosmetics, personal care).	n (administration, education, entertainment, services, craftsmen)) ding galvanic and electroplating products) / PC 16 (Heat transfer fluids) / PC 20 (Products such Is) / PC 35 (Washing and cleaning products (including solvent based products) / PC 37 (Water				
2.1	Contributing scenario (1) controlling environmental exposure for use of calcium nitrate by professionals	(ES3)				
Environmen	tal exposure due to use of calcium nitrate by professionals					
systems (EF open system As this sub- environment	RC 8b), wide dispersive indoor use resulting in inclusion into or onto a matrix (ERC 8c), wide dispersive outdoor u is (ERC 8e), wide dispersive indoor use of substances in closed systems (ERC 9a) and wide dispersive outdoor i stance does fulfil criteria for classification as hazardous to the environment, the environmental risk assessme are not included during this use.	se of processing aids in open systems (ERC 8d), wide dispersive use of reactive substances in use of substances in closed systems (ERC 9b). ent has not been carried out for this substance and therefore the conditions that affect the				
2.2	Contributing scenario (2) controlling worker exposure for professional use of calcium nitrate for formula	ting preparations and end use.				
All the relevance of the consequent	ant processes for this scenario identified by the PROC codes in point 1 of this scenario (PROC 1/2/5/8a/8b/9/10 ty they are all covered by just one contributing scenario (2).	/13/15/20) have the same operating conditions and risk management measures for personnel.				
Product cha	aracteristics	Solid with low dust formation index Liquid Substance concentration > 25%				
Quantities u	ised	Not relevant				
Frequency	and duration of use or exposure	> 4 hours a day				
Human fact Other opera	ors not influenced by risk management ational conditions that have an impact on worker exposure	Used indoors and outdoors				
Technical c	onditions and measures at process level (source) to prevent release	Not relevant 1 Adequate containment of the substance 2 Good ventilation conditions				
Technical c	onditions and measures for controlling dispersion of the source to workers	 Occid splashing. Use specific dispensers and pumps designed especially to prevent splashes/leaks/exposure 				
Organisatio	nal measures to prevent or limit releases, dispersion and exposure	Not relevant				
Conditions	and measures for personal protection, hygiene and health evaluation	Use safety glasses				
Information	for contributing scenario 1 (environmental exposure):					
No environm	nental assessment was completed because the substance does not fulfil criteria for classification as hazardous fo	or the environment and therefore there is no additional assessment of environmental exposure.				
Information	for contributing scenario 2 (exposure for personnel):					
A qualitative	assessment has been included that concludes that this use is safe for workers.					
The main toxicological effect of this substance is eye irritation (local parameter), for which a DNEL value cannot be estimated, because there is no dose-response information available. Although this substance is toxic orally, this route of exposure is not relevant for this scenario, it is not considered probable and therefore a value for oral exposure was not estimated. The substance did not show systemic effects in studies on repeated doses (chronic), made with doses that are so high that that the workers are not going to be exposed to them (see relevant DNEL: section 8 FDS), it was also considered unnecessary to carry out an assessment of quantitative risks.						
4	Guidance for intermediate users to assess if they working within the limits set by the ES					
Additional ri	sk management measures apart from the ones mentioned above in the contributing scenarios (2.1, 2.2) are	not required to guarantee safety during this use and thus work within the limits of the ES 3				
5	5 Good practice advice in addition to that included in the Chemical Safety Assessment (CSA) required by REACH. Measures not subject to art. 37 (4) REACH					
- Adequate	containment of the substance					
 Minimise th Segregate Utilise effe Good venti Minimise m Avoid cont 	ne number of exposed personnel the releasing processes ctive contamination extraction systems lation conditions nanual handling act with contaminated objects and instruments					
- Regularly of - Supervise - Train perso	Jean the work area and equipment the area to check that risk management measures are being applied onnel for good practices tard personal hydrigene conditions					
 neep stand 	Keep standard personal hygiene conditions					

	Calcium Nitrate Solution				
	Safety Data Sheet Appendices				
	Exposure Scenario 4				
1	Title of Exposure Scenario (ES)				
	End use by consumers of fertilisers and other products				
2	Description of activities or processes covered by the exposure scenario				
	List of all the use descriptors related to ES 4				
	SU 21 * PC4/12/35/39 ERC8a/8b/8d/8e/10a				
	Name/s of contributing scenario/s related to the environment and their corresponding Environmental Release Class (ER	(C)			
	1. Wide dispersive indoor use of processing aids in open systems (ERC 8a)				
	3. Wide dispersive indoor use of processing aids in open systems (ERC 8d)				
	4. Wide dispersive outdoor use of reactive substances in open systems (ERC 8e)				
	5. Wide dispersive use of long-life articles and materials with low release (ERC 10a)				
	1. Anti-freeze and de-icing products (PC 4)				
	2. Fertilizers (PC 12)				
	3. Washing and cleaning products (PC 35) 4. Cosmetics, personal care (PC 39)				
	* Agency Guidance Document, Chapter R.12: Use descriptor systems: SU 21 (Uses by consumers: Private households (= gene	eral public = consumers)			
2.1	Contributing scenario (1) controlling environmental exposure for end use by consumers of fertilisers and other product	s (ES4)			
Environmen	tal exposure due to use by consumers of calcium nitrate contained in fertilizers and other products.				
Section 2.1 systems (EF and materia	describes emissions into the environment that might take place during wide dispersive indoor use of processing aids in open set (RC 8b), wide dispersive outdoor use of processing aids in open systems (ERC 8d), wide dispersive outdoor use of reactive subsets (swith low release (ERC 10a).	systems (ERC 8a), wide dispersive indoor use of reactive substances in open stances in open systems (ERC 8e) and wide dispersive use of long-life articles			
As this sub- environmen	stance does fulfil criteria for classification as hazardous to the environment, the environmental risk assessment has not bee t are not included during this use.	in carried out for this substance and therefore the conditions that affect the			
2.2	Contributing scenario (2) controlling consumer exposure for use of fertilizers, matches and fireworks				
All the relev Consequent	ant chemical product categories for this scenario identified by the PC codes in point 1 of this scenario (PC 4/12/35/39) have they are all covered by just one contributing scenario (2).	the same operating conditions and risk management measures for personnel.			
Eye exposu Directive co	re can take place while using solutions of fertilizers, anti-freeze and de-icing products, and washing and cleaning products. On ncerning cosmetics: 76/768/EC.	Consumer exposure to calcium nitrate in cosmetic products is covered by the			
		Solid with low dust formation index			
Product ch	aracteristics	Liquid Products containing calcium nitrate in concentrations of ≥ 10 and ≤ 25 %			
		Products containing calcium nitrate in concentrations of < 10%			
Quantities	used	Not relevant			
Frequency	and duration of use or exposure	Not relevant			
Human fact	ors not influenced by risk management	Not relevant			
Other opera	ational conditions that have an impact on worker exposure				
Conditions	and measures with information and recommendations for consumer conduct	Avoid splashes			
Conditions	Conditions and measures for personal protection and hygiene 1 If concentration is ≥ 10%, use safety glasses Conditions and measures for personal protection and hygiene 2 If concentration is < 10%, no personal protection is necessary				
3 Estimation of exposure and reference to its source					
Information for contributing scenario 1 (environmental exposure):					
No environmental assessment was completed because the substance does not fulfil criteria for classification as hazardous for the environment and therefore there is no additional assessment of environmental exposure.					
Information for contributing scenario 2 (exposure for personnel):					
A qualitative	assessment has been included that concludes that this use is safe for consumers.				
The main to orally, this re doses (chro	The main toxicological effect of this substance is eye irritation (local parameter), for which a DNEL value cannot be estimated, because there is no dose-response information available. Although this substance is toxic orally, this route of exposure is not relevant for this scenario, it is not considered probable and therefore a value for oral exposure was not estimated. The substance did not show systemic effects in studies on repeated doses (chronic), made with doses that are so high that that the workers are not going to be exposed to them (see relevant DNEL: section 8 FDS), it was also considered unnecessary to carry out an assessment of				

quantitative risks.

4 Guidance for intermediate users to assess if they working within the limits set by the ES

Additional risk management measures apart from the ones mentioned above in the contributory scenarios (2.1, 2.2) are not required to guarantee safety during the use of fertilizers, anti-freeze and de-icing products, and washing and cleaning products:

If concentration of calcium nitrate is \ge 10%, use safety glasses If concentration is < 10%, no personal protection is necessary