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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name

: X210002 FITO UNIVERSALE 1kg NPK 12-8-16

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Fertilizer

1.3 Details of the supplier of the safety data sheet

Blumen Group S.p.a. Via Carlo Strinati 7/9 - Loc. Le Mose 29122 Piacenza (PC) Italy

tel. +39 0523 573211 mail: msds@blumen.it

1.4 Emergency telephone number

GBK GmbH - Global Regulatory Compliance - 24h Telephone: +49 (0) 6132 - 84463

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)						
Hazard statements	:	Not a hazardous substance or mixture ac- cording to Regulation (EC) No. 1272/2008.				
Supplemental Hazard Statements	: EUH210	Safety data sheet available on request.				
Further information		azardous Substances" legislation (Ge- ordnung) appendix I, No. 5 (Ammonium Nitrate				

2.3 Other hazards

None known.



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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature

 Fertilizer Contains NPK - fertilizer containing: Ammonium Nitrate, ammonium salts, phosphates, potassium sulphate, magnesium sulphate, salts of calcium, potassium and possibly magnesium and trace elements.
 1H-Pyrazole, 3,4-dimethyl-,phosphate (1:1)

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
ammonium nitrate	6484-52-2 229-347-8 01-2119490981-27- XXXX	Ox. Sol. 3; H272 Eye Irrit. 2; H319	>= 10 - < 45
Borates, tetra sodium salts, pen- tahydrate	12179-04-3 215-540-4 01-2119490790-32- XXXX	Repr. 1B; H360FD Eye Irrit. 2; H319	<= 0,2

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

If inhaled	 Move to fresh air. Obtain medical attention. If unconscious place in recovery position and seek medical advice. In case of lung irritation, first treatment with dexametason aerosol (spray).
In case of skin contact	: Wash off with soap and water.
In case of eye contact	: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	: Clean mouth with water and drink afterwards plenty of water.
0 Moot important or mutant	and effects, both south and delayed

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	:	Ingestion may provoke the following symptoms:
		Methaemoglobinemia



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Risks	: Later control for pneumonia and lung oedema.
4.3 Indication of any immediate r	nedical attention and special treatment needed
Treatment	: Treat symptomatically. There is no specific antidote available.
SECTION 5: Firefighting meas	ures
5.1 Extinguishing media	
Suitable extinguishing media	: Water
Unsuitable extinguishing media	: Foam Dry chemical Carbon dioxide (CO2) Sand
5.2 Special hazards arising from	the substance or mixture
Specific hazards during fire- fighting	: At temperatures above 130 °C, dangerous decomposition gases can be emitted: Nitrogen monoxide, nitrogen dioxide, dinitrogenoxide, ammo- nia
5.3 Advice for firefighters	
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus.
Further information	: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
SECTION 6: Accidental releas	e measures
6.1 Personal precautions, protec	tive equipment and emergency procedures
Personal precautions	 Avoid dust formation. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

6.2 Environmental precautions

Environmental precautions	:	Do not empty into drains.
		Retain and dispose of contaminated wash water.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	: Use mechanical handling equipmen	t.
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6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

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7.1 Precautions for safe handling	
Advice on safe handling :	 Protect from contamination. Keep away from direct sunlight. Protect against heat. Protect from moisture.
Advice on protection against : fire and explosion	The product is not flammable. Keep away from heat and sources of ignition. Keep away from combustible materials.
Hygiene measures :	At the end of the shift the skin should be cleaned and skin- care agents applied.
7.2 Conditions for safe storage, inc	luding any incompatibilities
Requirements for storage : areas and containers	Keep away from heat. Keep away from sources of ignition - No smoking. Keep away from combustible material. Protect from contamination. When stored loose do not mix with other fertilizers. Protect against humidity (product is hygroscopic and tends to cake or disintegrate)
Further information on stor- : age conditions	Protect against water. Keep away from direct sunlight.
Storage class (TRGS 510) :	5.1C, Ammonium nitrate and ammonium nitrate containing preparations
7.3 Specific end use(s)	

7.5 Specific end use(s)

Specific use(s) : Always read the label and product information before use.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Borates, tetra so- dium salts, pen- tahydrate	12179-04-3		3 mg/m3	DE TRGS 900
Peak-limit: excur- sion factor (catego- ry)	8;(II)			
Further information	Commission for dangerous substances, The threshold value is based on the element content of the corresponding metal., When there is compliance with			



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	the OEL and born child	biological toleran	ce values, there is no ris	k of harming the un-
		AGW	0,5 mg/m3 (Borate)	DE TRGS 900
Peak-limit: excur- sion factor (catego- ry)	2;(l)			
Further information	element cont	ent of the corresp	bstances, The threshold oonding metal., When the ce values, there is no ris	ere is compliance with
			1 mg/m3	ACGIHTLV
		TWA	1 mg/m3	GB EH40

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health ef- fects	Value
ammonium nitrate	Workers	Inhalation	Long-term systemic effects	36 mg/m3
	Workers	Skin contact	Long-term systemic effects	5,12 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	2,56 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	8,9 mg/m3
	Consumers	Skin contact, Ingestion	Long-term systemic effects	2,56 mg/kg bw/day
Borates, tetra sodium salts, pentahydrate	Workers	Inhalation	Long-term exposure	6,7 mg/m3
	Consumers	Inhalation	Long-term exposure	3,4 mg/m3
	Workers	Skin contact	Long-term exposure	316,4 mg/kg bw/day
	Consumers	Skin contact	Long-term exposure	159,5 mg/kg bw/day
	Consumers	Ingestion	Long-term exposure, Short-term exposure	0,79 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
ammonium nitrate	Sewage treatment plant	18 mg/l
Borates, tetra sodium salts, pen- tahydrate	Fresh water	2,9 mg/l



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Marine water	2,9 mg/l
Soil	5,7 mg/kg
Intermittent use/release	13,7 mg/l
Sewage treatment plant	10 mg/l

8.2 Exposure controls

Personal protective equipment

Respiratory protection	:	respiratory protection only if aerosol or dust is formed.
		Particle filter EN 143 Type P1, low efficiency, (solid particles
		of inert substances).

Environmental exposure controls

General advice	: Do not empty into drains.
	Retain and dispose of contaminated wash water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: granular	
Colour	: various	
Odour	: very faint	
Odour Threshold	: No data available	
рН	: ca. 5 - 5,5, Concentration: 100 g/l (20 °	°C)
Melting point/range	: No data available	
Boiling point/boiling range	: Not applicable	
Flash point	: Not applicable	
Evaporation rate	: Not applicable	
Flammability (solid, gas)	: The product is not flammable.	
Upper explosion limit	: Not explosive	
Lower explosion limit	: Not explosive	
Vapour pressure	: Not applicable	
Relative vapour density	: Not applicable	



according to Regulation (EC) No. 1907/2006

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Bulk density	: ca. 1.150 kg/m³
Solubility(ies) Water solubility	: soluble
Partition coefficient: n- octanol/water	: Not applicable
Decomposition temperature	: > 130 °C To avoid thermal decomposition, do not overheat.
Viscosity Viscosity, dynamic	: Not applicable
Viscosity, kinematic	: Not applicable
Explosive properties	: Not explosive
Oxidizing properties	: Not considered an oxidizing substance
Particle characteristics Particle Size Distribution	: D50 = 3,2 mm D50 Tolerance range = 2,8 mm - 3,6 mm Measurement technique: Optoelectronic measurement meth- od

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions	: Evolution of ammonia u	under influence of alkalies.
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10.4 Conditions to avoid

Conditions to avoid	:	Protect from frost, heat and sunlight.
		Avoid moisture.

10.5 Incompatible materials

Materials to avoid



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alkaline reacting substances, flammable oxidizable substances, nitrites, metallic salts, metallic powder, herbicide, chlorinated hydrocarbons, organic compounds.

10.6 Hazardous decomposition products

Hazardous decomposition	:	Nitrogen monoxide, nitrogen dioxide, dinitrogenoxide, ammo-
products		nia

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Result: non-irritant

Acute toxicity		
Product:		
Acute oral toxicity	:	LD50 (Rat): > 2.000 mg/kg
0		
<u>Components:</u> ammonium nitrate:		
Acute oral toxicity	:	LD50 (Rat): > 2.950 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	> 88,8 mg/l Method: No information available.
Acute dermal toxicity	:	LD50 (Rat): > 5.000 mg/kg Method: OECD Test Guideline 402
Borates, tetra sodium salts,	per	ntahydrate:
Acute oral toxicity	:	LD50 (Rat): 3.200 - 3.400 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 2,0 mg/l Method: OECD Test Guideline 403
Acute dermal toxicity	:	LD50 (Rabbit): > 2.000 mg/kg
Skin corrosion/irritation		
<u>Product:</u> Species: Rabbit Method: OECD Test Guideline Result: non-irritant	e 40	4
<u>Components:</u> ammonium nitrate: Species: Rabbit Method: OECD Test Guideline	e 40	4

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Borates, tetra sodium salts, pentahydrate:

Species: Rabbit Result: No skin irritation

Serious eye damage/eye irritation

Product:

Species: Rabbit Method: OECD Test Guideline 405 Result: non-irritant

Components:

ammonium nitrate: Species: Rabbit Method: OECD Test Guideline 405 Result: Irritant

Borates, tetra sodium salts, pentahydrate:

Species: Rabbit Assessment: Irritant Result: Moderate eye irritation

Respiratory or skin sensitisation

Product:

Result: non-sensitizing

Components:

ammonium nitrate: Result: Does not cause skin sensitisation.

Borates, tetra sodium salts, pentahydrate:

Test Type: Buehler Test Species: Guinea pig Method: OECD Test Guideline 406 Result: Does not cause skin sensitisation.

Germ cell mutagenicity

Product:

Genotoxicity	in	vitro
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: Remarks: Contains no hazardous ingredients according to GHS

Components: ammonium nitrate:

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Genotoxicity in vitro : Meth Resu

: Method: OECD Test Guideline 471 Result: negative

Borates, tetra sodium salts, pentahydrate:

Germ cell mutagenicity- As- : In vitro tests showed mutagenic effects sessment

Carcinogenicity

Product:

Remarks: Contains no ingredient listed as a carcinogen

Components:

ammonium nitrate: Species: Rat Remarks: Animal testing did not show any carcinogenic effects.

Borates, tetra sodium salts, pentahydrate:

Carcinogenicity - Assess-	Carcinogenicity classification not possible from current data.
ment	

Reproductive toxicity

Product:	
Effects on fertility :	Remarks: No toxicity to reproduction
Effects on foetal develop- : ment	Remarks: Did not show teratogenic effects in animal experi- ments. Information given is based on data obtained from similar sub- stances.
<u>Components:</u> ammonium nitrate:	
Effects on fertility :	Species: Rat
	Remarks: Animal testing did not show any effects on fertility.
Effects on foetal develop- : ment	Species: Rat Remarks: Did not show teratogenic effects in animal experi- ments.
Borates, tetra sodium salts, pe Reproductive toxicity - As- : sessment	ntahydrate: In animal testing, risk of impaired fertility was shown only after administration of very high doses of this substance.

May damage fertility. May damage the unborn child.



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STOT - single exposure

Product:

Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Product:

Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

ammonium nitrate: Species: Rat NOAEL: > 1.500 mg/kg Application Route: Oral Exposure time: 28 d

Species: Rat NOAEL: = 256 mg/kg Application Route: Oral Exposure time: 52 w Method: OECD Test Guideline 453

Species: Rat NOAEL: >= 185 mg/kg Application Route: by inhalation Exposure time: 2 w Method: Repeated Dose Inhalation Toxicity: 28-day or 14-day Study.

Experience with human exposure

Product:

General Information : Danger of methaemoglobin formation.

Further information

Product:

Remarks: The product was not tested. The statement was derived from products of similar structure and composition.

SECTION 12: Ecological information



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12.1 Toxicity

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Product:		
Toxicity to fish	:	LC50 (Cyprinus carpio (Carp)): 422 mg/l Exposure time: 48 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia (water flea)): 555 mg/l Exposure time: 48 h Test Type: static test
Toxicity to algae	:	No observed effect concentration (Desmodesmus subspicatus (green algae)): 83 mg/l Exposure time: 168 h Test Type: other Method: No data available
Toxicity to bacteria	:	EC20 (activated sludge): ca. > 100 mg/l Exposure time: 0,5 h Test Type: other Method: No data available
Components:		
ammonium nitrate:		
Toxicity to fish	:	LC50 (Fish): > 100 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia (water flea)): 490 mg/l Exposure time: 48 h
		LC50 : 490 mg/l
Toxicity to algae	:	EC50 (Selenastrum capricornutum (green algae)): 1.700 mg/l Exposure time: 10 d
Boratos totra sodium selta m	·~-	atahudrata.
Borates, tetra sodium salts, p Toxicity to fish		LC50 (dab): 74 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 242 mg/l Exposure time: 24 h
Toxicity to algae	:	EC10 (Scenedesmus subspicatus): 24 mg/l Exposure time: 96 h
2 Persistence and degradability	v	

12.2 Persistence and degradability

Product:

Biodegradability	: Rer	arks: The product works in the soil as fertilizer and is	
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diminished in a few weeks.

Components:

ammonium nitrate:	
Biodegradability	: Remarks: The methods for determining the biological degra- dability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Product:	

Bioaccumulation	:	Remarks: Bioaccumulation is unlikely.
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Components:

ammonium nitrate: Bioaccumulation	: Remarks: Bioaccumulation is unlikely.
Partition coefficient: n- octanol/water	: log Pow: -3,1

12.4 Mobility in soil

Product:		
Mobility	:	Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:
i iouuot.

Assessment	: Remarks: No data available

12.6 Other adverse effects

Product:

Additional ecological infor- mation	 Disposal via sewage water treatment plants may cause impairment of the nitrification activity of the activated sludge. There is a high probability that the product is acute not harmful to aquatic organisms. Additional ecological information The product has not been tested. The information is derived from the properties of the individual components. At higher pH values, which can be found in natural surface waters, an increase of toxic effects on aquatic organisms may
	be expected.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



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Product	: Check if agriculture use is possible. Contact manufacturer.
Contaminated packaging	: Contaminated packaging should be emptied as far as possi- ble; then it can be passed on for recycling after being thor- oughly cleaned.

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	 This product contains substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57). Borates, tetra sodium salts, pen- tahydrate
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Water contaminating class (Germany)	: WGK 1 slightly water endangering
Other regulations	: TRGS 511 'Ammonium nitrate'
	This product is subject to Regulation (EU) 2019/1148; suspi- cious transactions, disappearance or theft of the product must be reported to the relevant authority.



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15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this product.

SECTION 16: Other information

Full text of H-Statements

H272 H319 H360FD	 May intensify fire; oxidizer. Causes serious eye irritation. May damage fertility. May damage the unborn child.

Full text of other abbreviations

Eye Irrit.	:	Eye irritation
Ox. Sol.	:	Oxidizing solids
Repr.	:	Reproductive toxicity

(Q)SAR - (Quantitative) Structure Activity Relationship; ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; DIN - Standard of the German Institute for Standardisation; ECHA - European Chemicals Agency; EC-Number - European Community number; ECx -Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule: ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TRGS - Technical Rule for Hazardous Substances; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA -Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not

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