


NPK 10-10-20 MgMnZn. BLUE BLUEEFFICIENT

1 Identification of the substance/mixture and of the company/undertaking				
1.1	Commercial name of the product	NPK 10 10 20 MgMnZn. BLUE Blueefficient		
	Chemical name	MIX, main ingredients superphosphate, monoammonium phosphate, diammonium phosphate, ammonium sulfate, urea and potassium chloride.		
	Synonyms	NPK complex fertilizer (EC fertilizer), NPK fertilizer, NPK		
	Chemical formula	Not available		
	EU-index number (Annex 1)	Not available		
	CE No	Not available		
	CAS No.	Not available		
	REACH Registration Number	Not available		
1.2	Use of the substance/preparation	EC FERTILIZER for foliar application. Use in dilution.		
1.3	Company name	Mirat Fertilizantes s.Lu		
	Company address	Avenida aldehuela, 10 Bajo 37003, Salamanca, España.		
	Company Phone	+34 92 310 30 14		
	Company e-mail	vitaterra@mira.net		
1.4	Emergency telephone	Spain. National Institute of Toxicology +34 91 562 04 20		
2 Hazards identification				
2.1	Classification	According to Regulation 1272/2008 [CLP]. Les. Oc. 1; H318		
2.2	Label elements			
2.2	According to Regulation 1272/2008	Pictograms	Word of caution	Indications of danger
			Caution	H318
2.3	Other hazards			
* For the full meaning of R-phrases and/or hazard statements (H): see section 16.				
3 Composition/information on ingredients				
	Name	%p/p	N° CAS	CLASSIFICATION R. 1272/2008
	SUPERPHOSPHATE	>10%	8011-76-5	Les. Oc. 1; H318
	MONOAMMONIUM PHOSPHATE	Any number	7722-76-1	Not classified as hazardous
	DIAMMONIUM PHOSPHATE	Any number	7783-28-0	Not classified as hazardous
	AMMONIUM SULFATE	Any number	7783-20-2	Not classified as hazardous
	UREA	Any number	57-13-6	Not classified as hazardous
	POTASSIUM CHLORIDE	Any number	7447-40-7	Not classified as hazardous
May contain other substances in such quantities that they do not affect the classification of the product:				
May contain other substances in such quantities that they do not affect the classification of the product: Inert: sand Magnesium oxide < 3%. Sodium borate < 3%. Colorants < 3%. Anti-caking agents < 3%.				
4 First aid measures				
4.1	Description of first aid measures			
	Inhalation	Remove affected person to fresh air if adverse effects occur. If victim is not breathing provide artificial respiration or if breathing is difficult, provide oxygen and seek immediate medical attention. Do not use mouth-to-mouth resuscitation. Consult a doctor immediately when massive dust of the substance is inhaled.		
	Ingestion	In case of discomfort take to a doctor. Rinse mouth with plenty of water and give water to drink. Do not give anything if the person is unconscious. Do not induce vomiting.		
	Skin contact	Wash affected area with soap and water for at least 15 minutes. Remove contaminated clothing and footwear. Provide medical attention if irritation persists or worsens.		
	Eye contact	Flush eyes with plenty of water for at least 15 minutes, lifting the upper and lower eyelids. Remove contact lenses if worn and easy to do. Provide medical attention if irritation persists or worsens.		
4.2	Main symptoms and effects			
	Skin	Prolonged and repeated contact may cause irritation and dermatitis.		
	Eyes	Redness and conjunctivitis		
	Ingestion	May cause gastrointestinal disorders, nausea, vomiting and diarrhea.		
	Inhalation	Dizziness, drowsiness or respiratory irritation		
4.3	Indication of all medical care and special treatments	During thermal decomposition or fire, toxic gases such as ammonia, nitrogen oxide, sulfur oxide, COx, chlorides, etc. may be produced.		
5 Firefighting measures				
5.1	Extinguishing media	Water		
	Extinguishing media NOT to use	Chemical extinguishers or foams. Do not smother fire with sand		
5.2	Special hazards	During heating or fire, toxic gases such as ammonia, nitrogen oxide, sulfur oxide, COx, chlorides, etc. may be produced.		
5.3	Advice for firefighters	No special measures required. Avoid breathing fumes. Open windows and doors for ventilation. Avoid contamination with incompatible materials.		
	Special protection in firefighting	Self-contained breathing apparatus and appropriate clothing		
6 Accidental release measure				
6.1	Personal precautions, protective equipment and emergency procedures	Avoid the formation of dust and its dispersion in the wind. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Use appropriate protective equipment. Do not walk on spilled product.		
6.2	Environmental precautions	Prevent the product from reaching surface water and sewage systems. Do not discharge directly into drains. If product accidentally enters surface water or sewage system, notify local authorities.		
6.3	Methods and material for containment and cleaning up	Sweep up the product and dispose of in properly labeled containers for disposal. Clean the area with plenty of water. Avoid dust formation and wind dispersion. Eliminate traces of residues.		
6.4	Reference to other sections	Note: see section 8 for personal protective equipment and section 13 for waste disposal.		

7 Handling and storage						
7.1 Precautions for safe handling		Avoid contact with skin, eyes and clothing. Avoid dust formation. Clean equipment before handling. Do not eat, drink or smoke in the workplace. Wash hands after use. Remove contaminated clothing and protective equipment before entering food areas.				
7.2 Conditions for safe storage, including any incompatibilities		Keep away from sources of heat or fire. Keep away from moisture. Avoid unnecessary exposure to the atmosphere to prevent moisture uptake. Avoid mixing with fuels and incompatible materials (10.3). Do not mix with other fertilizers.				
Recommended packaging materials		polyethylene, polypropylene, etc.				
7.3 Specific end use(s)		see section 1.2				
Note: stability and reactivity, see Section 10.						
8 Exposure controls/personal protection						
8.1 Exposure limit values						
		Time-weighted average (TWA)		Not available		
SUPERPHOSPHATE						
ISQ derived	DNEL			Industrial	Consumer	
		Oral		Not applicable	2.1 mg/kg	
		Inhalatory		3.1 mg/m ³	0.9 mg/kg	
	Dermal		17.4 mg/kg	10.4 mg/kg		
PNEC			Water	Air	Soil	Microbiological
	Fresh water: 1.7 mg/l Marine water: 0.17 mg/l Intermittent emissions: 17 mg/l		Not available	Not available	10 mg/l	Sediment
8.2 Exposure controls		If necessary, use local extractors				
Hygienic controls		It is recommended to handle the product in a ventilated place.				
Individual protection		Personal protective equipment: Use personal protective equipment according to Directive 89/686/EEC.				
Eyes		In general, safety glasses with side shields are recommended to protect against liquid splashes.				
Skin and body		Avoid contact with skin. The use of gloves is recommended.				
Respiratory		In case of insufficient ventilation, use suitable respiratory equipment.				
Control de la exposición del medio ambiente		Do not discharge into running water or sewage system.				
Choose personal protection adapted to the risks of exposure.						
9 Physical and chemical properties						
9.1 Information on basic physical and chemical properties						
Appearance	Granular Solid					
Color	Blue					
Odor	Odorless					
Dilution pH	pH in 10% aqueous solution: 3-6 according to composition					
Melting point	Not applicable					
Boiling point	> 100 ° C. May decompose before melting					
Flash point	Not available					
Evaporation rate	Not available					
Flammability	Not available					
Explosive properties	Not explosive					
Upper/lower flammability limits	Not available					
Vapor pressure	Not available					
Vapor density	Not available					
Relative density	depending on composition between 900-1100 kg/m ³					
Solubility	Soluble in water					
Partition coefficient n-octanol/water	Not available					
Auto-ignition temperature	Not available					
Decomposition temperature	Not available					
Viscosity	Not applicable					
Explosive properties	Not applicable					
10 Stability and reactivity						
10.1 Reactivity		Stable under normal handling and storage conditions				
10.2 Chemical stability		Stable under normal handling and storage conditions				
10.3 Possibility of hazardous reactions		When heated, it can produce ammonia, nitrogen oxide, sulfur oxide, CO _x , chlorides, etc.				
10.4 Conditions to avoid		Unnecessary exposure to the atmosphere, heat sources, heating, and welding work.				
10.5 Incompatible materials		Acids, alkalis, nitrates and nitrites, sodium or calcium hypochlorite, strong oxidizers, reducing agents. Copper, Nickel, Cobalt, Zinc and their alloys.				
10.6 Hazardous decomposition products		Formation of toxic gases during heating or in case of fire (ammonia, nitrogen oxide, sulfur oxide, CO _x , chlorides, etc). Ammonia may be produced if mixed with lime, soda, etc. (alkalis). See section 7 for handling and storage.				
11 Toxicological information						
11.1 Information on toxicological effects						
Acute toxicity						
Component	N° CAS	Method	Species	Via	Result	
SUPERPHOSPHATE	8011-76-5	OECD 402 403	OECD 425	Oral Cutaneous Inhalation	LD 50 > 2000 mg/kg LD 50 > 5 mg/l LD 50 > 2000 mg/kg Based on available data, the classification criteria are not met.	
MONOAMMONIUM PHOSPHATE	7722-76-1		Rat	Oral	DL 50 > 2000 mg/kg	
DIAMMONIUM PHOSPHATE	7783-28-0		Rat	Oral	DL 50 > 2000 mg/kg	
AMMONIUM SULFATE	7783-20-2		Rat	Oral	DL 50 2000-4250 mg/kg	
UREA	57-13-6		Rat	Oral	DL 50 13,3-15 mg/kg	
POTASSIUM CHLORIDE	7447-40-7		Not available	Oral	DL 50 > 3020 mg/kg	
Corrosion / skin irritation						
Component	N° CAS	Method	Species	Result		
SUPERPHOSPHATE	8011-76-5	OECD 404	Rabbit	Non-irritant. Based on available data, the classification criteria are not met.		
Severe eye injury/irritation						
Component	N° CAS	Method	Species	Result		
SUPERPHOSPHATE	8011-76-5	OECD 405	Rabbit	Irritant.		
Respiratory system or skin sensitization						
Component	N° CAS	Method	Species	Via	Result	
SUPERPHOSPHATE	8011-76-5	OECD 429	Rat	Cutaneous Respiratory	Not sensitizing. Based on available data, the classification criteria are not met. Not available. Lack of data	

Carcinogenicity					
Component	N° CAS	Method	Species	Via	Result
SUPERPHOSPHATE	8011-76-5	Not available	Not available	Not available	Not available
Mutagenicity in germ cells					
Component	N° CAS	Method	Species	Via	Result
SUPERPHOSPHATE	8011-76-5	OECD 471 OECD 473 476	Bacteria Mammalian Cells OECD Mammalian cells	Not available	Not mutagenic Not mutagenic Not mutagenic Based on available data, the classification criteria are not met.
Reproductive toxicity					
Component	N° CAS	Method	Species	Via	Result
SUPERPHOSPHATE	8011-76-5	OECD 422	Rat	Oral	NOAEL = 750 mg/kg Based on available data, the classification criteria are not met.
Specific target organ toxicity (STOT) - single exposure					
Component	N° CAS	Method	Species	Via	Result
SUPERPHOSPHATE	8011-76-5				Not applicable. Based on available data, the classification criteria are not met.
Specific target organ toxicity (STOT) - repeated exposure					
Component	N° CAS	Method	Species	Via	Result
SUPERPHOSPHATE	8011-76-5				Not applicable. Based on available data, the classification criteria are not met.
Aspiration hazard					
Component	N° CAS	Method	Species	Via	Result
SUPERPHOSPHATE	8011-76-5				Not available
12 Ecological information					
12.1 Toxicity					
Aquatic toxicity					
Component	N° CAS	Fish	Crustaceans	Algae	
SUPERPHOSPHATE	8011-76-5	CL 50 (96h) > 85.9 mg/l	CE 50 (72h) > 1790 mg/l	CE 50 (72h) > 87.6 mg/l	
MONOAMMONIUM PHOSPHATE	7722-76-1	CL 50 (96h) > 85.9 mg/l	CL 50 (72h) 1790-1825 mg/l	NOEC (72h) > 97.1 mg/l	
DIAMMONIUM PHOSPHATE	7783-28-0	CL 50 (96h) 1700-1875 mg/l	CL 50 (48h) 52-81 mg N amoniacal / l	NOEC (72h) > 97.1 mg/l	
AMMONIUM SULFATE	7783-20-2	CL 50 (96h) > 53 mg/l	CE 50 (96h) > 168.8 mg/l	CE 50 (18d) 2700 mg/l	
UREA	57-13-6	CL 50 (96h) > 6810 mg/l	CL 50 (24h) > 10000 mg/l	CL 50 (192h) > 47 mg/l	
POTASSIUM CHLORIDE	7447-40-7	CL 50 (96h) 750-1020 mg/l	CL 50 (48h) 440-880 mg/l	NOEC (72h) > 100 mg/l	
Terrestrial Toxicity					
Component	N° CAS	Macroorganisms	Microorganisms	Other organisms	
SUPERPHOSPHATE	8011-76-5	Not available	Not available	Not available	
Microbiological activity in wastewater treatment plants					
Component	N° CAS	Toxicity to aquatic microorganisms			
SUPERPHOSPHATE	8011-76-5	EC 50 (3h) > 100 mg/l			
12.2 Persistence and degradability					
Component	N° CAS	Aquatic life	Photolysis	Biodegradability	
SUPERPHOSPHATE	8011-76-5	Not available	Not applicable	Not applicable	
MONOAMMONIUM PHOSPHATE	7722-76-1	Not available	Not available	Easily	
DIAMMONIUM PHOSPHATE	7783-28-0	Not available	Not available	Easily	
AMMONIUM SULFATE	7783-20-2	Not available	No evidence	Inorganic substance	
UREA	57-13-6	Not available	Not available	10,9 mg/l in 1h at 20°C	
POTASSIUM CHLORIDE	7447-40-7	Not available	Not available	Inorganic substance	
12.3 Potencial de bioacumulación					
Component	N° CAS	Octanol-water partition coefficient (Kow)	Bioconcentration factor (BCF)	Bioaccumulation potential	
SUPERPHOSPHATE	8011-76-5	No relevant		Low bioaccumulation potential	
MONOAMMONIUM PHOSPHATE	7722-76-1	Not available		Not available	
DIAMMONIUM PHOSPHATE	7783-28-0	Not available		Not available	
AMMONIUM SULFATE	7783-20-2	Not applicable		Not applicable	
UREA	57-13-6	-1,73		Low bioaccumulation potential	
POTASSIUM CHLORIDE	7447-40-7	Not applicable		Not applicable	
12.4 Mobility on the ground					
Component	N° CAS	Result			
SUPERPHOSPHATE	8011-76-5	Adsorption	Low adsorption potential		
		Volatilization	Not applicable		
MONOAMMONIUM PHOSPHATE	7722-76-1	Soluble in water and citrate. Rapidly transformed by soil microorganisms.			
DIAMMONIUM PHOSPHATE	7783-28-0	Soluble in water and citrate. Rapidly transformed by soil microorganisms.			
AMMONIUM SULFATE	7783-20-2	Soluble in water			
UREA	57-13-6	Soluble in water			
POTASSIUM CHLORIDE	7447-40-7	Soluble in water			
12.5 Results of PBT and vPvB assessment					
PBT/vPvB assessment has not been carried out as the substance is inorganic in nature.					
12.6 Other adverse effects					
A heavy spill can cause adverse environmental impact such as eutrophication in surface waters.					
13 Disposal considerations					
13.1 Waste treatment methods					
Depending on the degree and nature of the waste it can be disposed of as fertilizer in the field, as raw material for the manufacture of fertilizers or disposed of by an authorized waste manager.do not discharge into sewage systems. Avoid reaching aquifers and surface waters. controlled biodegradation in water treatment plants is possible. containers should be cleaned and reused or managed in accordance with current legislation. Do not remove label from container until it has been thoroughly cleaned.					

14 Transport information							
14.1 -	Información Reglamentaria	ONU Number	Proper shipping name	Class	Packing group	Environmental hazards	Special precautions for users
14.6	International carriage of dangerous goods by road (ADR)	Not applicable	Not classified as hazardous material for transport within the transport regulations				
	Maritime Transportation (IMDG)	Not applicable	Not classified as hazardous material for transport within the transport regulations				
	Air transportation (ICAO/IATA)	Not applicable	Not classified as hazardous material for transport within the transport regulations				
14.7 Transport in bulk according to Marpol 73/78 Annex II and IBC Code: Not applicable.							
15 Regulatory information							
15.1 Safety, health and environmental regulations and legislation specific to the substance or mixture							
Fertilizer Regulation 2003/2003							
R.D. 824/2005							
Regulation 1907/2006 (REACH)							
Regulation 1272/2008 (CLP)							
15.2 Chemical Safety Assessment							
No data available							
16 Other information							
Hazard statements		H318: Causes serious eye damage					
Cautionary advice		P280: Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P301+P310: F SWALLOWED: Immediately call a POISON CENTER or doctor/physician.					
Bibliographic references and data sources		Chemical Safety Report of the substance. EFMA/FERTILIZER EUROPE Guidance Documents.					
Abbreviations and acronyms		NA: Not applicable MMAD: Mean Mass Aerodynamic Diameter VLA-ED: environmental limit value (daily exposure) VLA-EC: environmental limit value (short duration) NOAEL: doses with no observed adverse effects DL50: 50% lethal dose CL50: 50% lethal concentration CE50: 50% effective concentration DNEL: concentration without derivative effect PNEC: expected concentration with no effect LOEC: lowest observed effect concentration NOEC: non observed effect concentrated NOAEC: non observed adverse effects concentrated					
Adequate training for workers		Mandatory training in Occupational Risk Prevention.					
Modifications introduced in the current revision		Adaptation to Regulation 453/2010					
<p>The information contained in this Safety Data Sheet is given in good faith and in the belief of its accuracy, based on the knowledge available about the product at the time of publication. It does not imply acceptance of any commitment or legal liability on the part of the Company for the consequences of its use or misuse in any particular circumstances.</p>							

4	Risk management measures	
4.1	Measures relating to workers	Not applicable
4.2	Measures relating to consumers	Wear safety glasses Avoid splashes Apply downwind Read the product label
4.3	Environmental measures	Environmentally safe
4.4	Measures relating to waste	Manage waste according to local regulations.
5 Estimated exposure under the conditions described.		
5.1	Worker exposure	Not applicable
5.2	Consumer exposure	If operating conditions and risk management measures are applied, exposure is not expected to occur.
5.3	Indirect exposure of people through the environment	Not available
5.4	Environmental exposure	Not relevant
6 Information for the downstream user to evaluate operating conditions		
		Not relevant