

ORGANOVR-F

1 Identification of the substance/mixture and of the company/undertaking				
1.1	Commercial name of the product	ORGANOVR-F		
	Chemical name	Iron ethylenediaminetetraacetate sodium salt Zinc sulfate		
	Synonyms	Mixture of compounds		
	Chemical formula	Mixture of micronutrients Iron + Zinc		
	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 mixture of micronutrients Iron + Zinc, 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	Not classified as hazardous		
2.2	Label elements			
2.2	According to Regulation 1272/2008	Pictograms	Word of caution	Indications of danger
		N.A.	N.A.	N.A.
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	Nº CAS	CLASSIFICATION R. 1272/2008
	Iron ethylenediaminetetraacetate sodium salt	11,70 %	15708-41-5	Not classified as hazardous
	Zinc ethylenediaminetetraacetate disodium salt	8,00 %	14025-21-9	Not classified as hazardous
	Water	74,77 %	7732-18-5	Not classified as hazardous
	May contain other substances in such quantities that they do not affect the classification of the product:			
	Not Applicable			
4 First aid measures				
4.1	Description of first aid measures			
	Inhalation	Remove the person from the place of the accident and take him/her to a ventilated place, place the victim at rest.		
	Ingestion	If the product has been swallowed and the person is conscious, rinse mouth. Do not induce vomiting and seek medical attention.		
	Skin contact	Remove contaminated clothing and wash exposed skin areas with mild soap and plenty of water for 5 - 10 minutes. If discomfort exists, consult a physician.		
	Eye contact	Remove contact lenses if necessary and rinse immediately with plenty of water for 5 - 10 minutes. If there is discomfort, consult a doctor.		
4.2	Main symptoms and effects			
	Skin	May cause itching, redness and irritation.		
	Eyes	Eye itching and discomfort, redness.		
	Ingestion	Possible mild to moderate digestive tract involvement, decreased absorption of other metals which may lead to stomach disorders such as diarrhea, weakness, kidney damage, muscle cramps, bone marrow depression and a generalized allergic reaction.		
	Inhalation	If inhaled it may cause itching and discomfort of the respiratory mucous membranes.		
4.3	Indication of all medical care and special treatments	There is no specific antidote. In case of accident follow the indications indicated above. Show this safety data sheet and recommend symptomatic treatment.		
5 Firefighting measures				
5.1	Extinguishing media	Recommended: Use water spray, carbon dioxide (CO2), foam or dry powder, taking into account other substances and products stored.		
	Extinguishing media NOT to use	Direct waterjet		
5.2	Special hazards	In case of combustion or thermal degradation, toxic gases may be produced from the containers. Fire residues and contaminated extension water should be disposed of according to local regulations.		
5.3	Advice for firefighters	In case of fire in the surroundings, follow the indications below: 1-High temperatures may result in high pressures inside closed containers. 2-Avoid inhalation of fumes or vapors generated. Use suitable respiratory equipment. 3-Do not allow spills from fire extinguishing to flow into drains or watercourses.		
	Special protection in firefighting	Firefighters should wear appropriate protective equipment and self-contained breathing apparatus with a full face mask operating in positive pressure mode. Firefighter clothing (including helmets, gloves and protective boots) conforming to European standard EN 469 provides a basic level of protection in the event of a chemical incident.		
6 Accidental release measure				
6.1	Personal precautions, protective equipment and emergency procedures	Restrict access area, do not touch or walk through spilled material, stop leak if it can be done without risk. Wear work clothes and shoes when using or handling this product. Protective side shields, plastic gloves, rubber aprons should be worn. Operators should be instructed in the use of safety equipment.		
6.2	Environmental precautions	Prevent the product from reaching the sewage system. Avoid soil contamination.		
6.3	Methods and material for containment and cleaning up	Use inorganic, inert, non-combustible absorbent material. Collect the material for disposal and place it in a clean and dry container for disposal, according to the required legislations. Wash the area with water and detergent.		
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	Use personal protective equipment, avoiding contact with skin, eyes and clothing. Ensure adequate ventilation. Do not eat, smoke or drink while handling the product. Wash hands after handling the product and before eating, drinking or smoking. Remove clothing immediately if product gets inside and/or comes in contact with the product. Wash hands and skin thoroughly after handling.		
7.2	Conditions for safe storage, including any incompatibilities	Keep the product in the original container tightly closed, in a cool, ventilated and covered place. Store according to local / national regulations, observing the precautions indicated on the labeling.		
	Recommended packaging materials	HDPE (High Density Polyethylene) plastic containers		

7.3	Specific end use(s)	Agriculture EC Fertilizer							
<i>Note: stability and reactivity, see Section 10.</i>									
8 Exposure controls/personal protection									
8.1	Exposure limit values	Time-weighted average (TWA)			Iron ethylenediaminetetraacetate sodium salt	10 mg/m ³	Respirable Dust Fraction		
					Zinc ethylenediaminetetraacetate disodium salt	Not available	Respirable Dust Fraction		
					Water	Not available	Respirable Dust Fraction		
ISQ derived	DNEL	Industrial			Consumer				
		Oral							
		Iron ethylenediaminetetraacetate sodium salt			Long-term systemic population: 0.42 mg/kg body weight /day		Not available		
		Zinc ethylenediaminetetraacetate disodium salt			Not available		Not available		
		Water			Not available		Not available		
		Inhalatory							
		Iron ethylenediaminetetraacetate sodium salt			Worker local acute inhalation (mg/m ³)/DNEL worker systemic acute inhalation (mg/m ³)= 74 / Long-term inhalation of worker dust aerosol (mg/m ³)= 2		Not available		
		Zinc ethylenediaminetetraacetate disodium salt			Not available		Not available		
		Water			Not available		Not available		
		Dermal							
		Iron ethylenediaminetetraacetate sodium salt			Long-term systemic dermal worker (mg/m ³)= 4200		Not available		
		Zinc ethylenediaminetetraacetate disodium salt			Not available		Not available		
		Water			Not available		Not available		
		PNEC				Water	Air	Soil	Microbiological
Iron ethylenediaminetetraacetate sodium salt			Fresh water= 3.1 mg/l / Marine water= 0.31 mg/l / Intermittent discharge= 1.09 mg/l / Wastewater treatment plant= 64 mg/l	Not available	Not available	Not available	Not available	Not available	
Zinc ethylenediaminetetraacetate disodium salt			Not available	Not available	Not available	Not available	Not available	Not available	
Water			Not available	Not available	Not available	Not available	Not available	Not available	
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.							
<i>Choose personal protection adapted to the risks of exposure.</i>									
9 Physical and chemical properties									
9.1	Information on basic physical and chemical properties								
	Appearance	Thick Liquid							
	Color	Reddish							
	Odor	Characteristic							
	Dilution pH	6,5 - 7,5							
	Melting point	Not applicable							
	Boiling point	Not available							
	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	1,07 ± 0,05 g/cc							
	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	No known hazardous reactions under normal process conditions.							
10.4	Conditions to avoid	Heat, flames and other sources of ignition.							
10.5	Incompatible materials	Acids, oxidizing minerals, strong reducing or oxidizing agents.							
10.6	Hazardous decomposition products	Carbon monoxide and unidentified organic compounds may be formed during the process.							
11	Toxicological information								
11.1	Information on toxicological effects								
	Acute toxicity								
	Component	N° CAS	Method	Species	Via	Result			
	Iron ethylenediaminetetraacetate sodium salt	15708-41-5	Not available	Rat	Oral	DL50: 2.000 mg/kg			
	Zinc ethylenediaminetetraacetate disodium salt	14025-21-9	Not available	Not available	Not available	Not available			
	Water	7732-18-5	Not available	Not available	Not available	Not available			
	Corrosion / skin irritation								
	Component	N° CAS	Method	Species	Via	Result			
	Iron ethylenediaminetetraacetate sodium salt	15708-41-5	Not available	Rat	Dermal	DL50: 2.000 mg/kg			
	Zinc ethylenediaminetetraacetate disodium salt	14025-21-9	Not available	Not available	Not available	Not available			
	Water	7732-18-5	Not available	Not available	Not available	Not available			

Severe eye injury/irritation					
Component	N° CAS	Method	Species	Via	Result
Iron ethylenediaminetetraacetate sodium salt	15708-41-5	Not available	Not available	Not available	Not available
Zinc ethylenediaminetetraacetate disodium salt	14025-21-9	Not available	Not available	Not available	Not available
Water	7732-18-5	Not available	No disponible	Not available	Not available

Respiratory system or skin sensitization					
Component	N° CAS	Method	Species	Via	Result
Iron ethylenediaminetetraacetate sodium salt	15708-41-5	Not available	Rat	Inhalation	CL50 4h: 2.75 mg/L
Zinc ethylenediaminetetraacetate disodium salt	14025-21-9	Not available	Not available	Not available	Not available
Water	7732-18-5	Not available	No disponible	Not available	Not available

Carcinogenicity					
Component	N° CAS	Method	Species	Via	Result
Iron ethylenediaminetetraacetate sodium salt	15708-41-5	Not available	Not available	Not available	Not available
Zinc ethylenediaminetetraacetate disodium salt	14025-21-9	Not available	Not available	Not available	Not available
Water	7732-18-5	Not available	No disponible	Not available	Not available

Mutagenicity in germ cells					
Component	N° CAS	Method	Species	Via	Result
Iron ethylenediaminetetraacetate sodium salt	15708-41-5	Not available	Not available	Not available	Not available
Zinc ethylenediaminetetraacetate disodium salt	14025-21-9	Not available	Not available	Not available	Not available
Water	7732-18-5	Not available	No disponible	Not available	Not available

Reproductive toxicity					
Component	N° CAS	Method	Species	Via	Result
Iron ethylenediaminetetraacetate sodium salt	15708-41-5	Not available	Not available	Not available	Not available
Zinc ethylenediaminetetraacetate disodium salt	14025-21-9	Not available	Not available	Not available	Not available
Water	7732-18-5	Not available	No disponible	Not available	Not available

Specific target organ toxicity (STOT) - single exposure					
Component	N° CAS	Method	Species	Via	Result
Iron ethylenediaminetetraacetate sodium salt	15708-41-5	Not available	Not available	Not available	Not available
Zinc ethylenediaminetetraacetate disodium salt	14025-21-9	Not available	Not available	Not available	Not available
Water	7732-18-5	Not available	No disponible	Not available	Not available

Specific target organ toxicity (STOT) - repeated exposure					
Component	N° CAS	Method	Species	Via	Result
Iron ethylenediaminetetraacetate sodium salt	15708-41-5	Not available	Not available	Not available	Not available
Zinc ethylenediaminetetraacetate disodium salt	14025-21-9	Not available	Not available	Not available	Not available
Water	7732-18-5	Not available	No disponible	Not available	Not available

Aspiration hazard					
Component	N° CAS	Method	Species	Via	Result
Iron ethylenediaminetetraacetate sodium salt	15708-41-5	Not available	Not available	Not available	Not available
Zinc ethylenediaminetetraacetate disodium salt	14025-21-9	Not available	Not available	Not available	Not available
Water	7732-18-5	Not available	No disponible	Not available	Not available

12 Ecological information

12.1 Toxicity

Aquatic toxicity					
Component	N° CAS	Fish	Crustaceans	Algae	
Iron ethylenediaminetetraacetate sodium salt	15708-41-5	CEL50 (fish, 96 h): 100 mg/L	CE50 (Daphnia, 48 h): 100,9 mg/L	Not available	
Zinc ethylenediaminetetraacetate disodium salt	14025-21-9	Not available	Not available	Not available	
Water	7732-18-5	Not available	Not available	Not available	

Terrestrial Toxicity					
Component	N° CAS	Macroorganisms	Microorganisms	Other organisms	
Iron ethylenediaminetetraacetate sodium salt	15708-41-5	Not available	Not available	Not available	
Zinc ethylenediaminetetraacetate disodium salt	14025-21-9	Not available	Not available	Not available	
Water	7732-18-5	Not available	Not available	Not available	

Microbiological activity in wastewater treatment plants					
Component	N° CAS	Toxicity to aquatic microorganisms			
Iron ethylenediaminetetraacetate sodium salt	15708-41-5	Not available			

	Zinc ethylenediaminetetraacetate disodium salt	14025-21-9	Not available			
	Water	7732-18-5	Not available			
12.2 Persistence and degradability						
	Component	N° CAS	Aquatic life	Photolysis	Biodegradability	
	Iron ethylenediaminetetraacetate sodium salt	15708-41-5	CEL50 (fish, 96 h): 100 mg/L	Not available	Not available	
	Zinc ethylenediaminetetraacetate disodium salt	14025-21-9	Not available	Not available	Not available	
	Water	7732-18-5	Not available	Not available	Not available	
12.3 Potencial de bioacumulación						
	Component	N° CAS	Octanol-water partition coefficient (Kow)	Bioconcentration factor (BCF)	Bioaccumulation potential	
	Iron ethylenediaminetetraacetate sodium salt	15708-41-5	Not available	Not available	Not available	
	Zinc ethylenediaminetetraacetate disodium salt	14025-21-9	Not available	Not available	Not available	
	Water	7732-18-5	Not available	Not available	Not available	
12.4 Mobility on the ground						
	Component	N° CAS	Result			
	Iron ethylenediaminetetraacetate sodium salt	15708-41-5	Adsorption	Not available		
			Volatilization	Not available		
	Zinc ethylenediaminetetraacetate disodium salt	14025-21-9	Adsorption	Not available		
			Volatilization	Not available		
	Water	7732-18-5	Adsorption	Not available		
			Volatilization	Not available		
12.5 Results of PBT and vPvB assessment						
	Not determined					
12.6 Other adverse effects						
	N.A.					
13 Disposal considerations						
13.1 Waste treatment methods						
	Packaging/containers: Containers with product residues should be disposed of as non-hazardous organic waste. Dilute and neutralize product residues. Empty waste at appropriate facilities. Disposal conditions: Dispose of product residues and its containers with all possible precautions and in accordance with local and national regulations in force.					
14 Transport information						
14.1 - 14.6	Información Reglamentaria	ONU Number	Proper shipping name	Class	Packing group	Environmental hazards
	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	N.A.				
	Cautionary advice	P101: If medical advice is needed, have product container or label at hand. P102: Keep out of reach of children. P264: Wear protective gloves/protective clothing/eye protection/face protection. P270: Do not eat, drink or smoke when using this product. P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. . . P411: Store at temperatures not exceeding 35C. P501: Dispose of contents according to your local laws				
	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				
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.						

Annexes to the Safety Data Sheet ORGANOVIR-F Exposure Scenario 1

1 Title of the Exposure Scenario	
Professional use as fertilizer	
2 Description of the activities or processes covered by the exposure scenario.	
Sector of Use (SU)	SU 22: Professional uses: Public sector (administration, education, entertainment, services, crafts, etc.)
Product Category (PC)	PC 12: Fertilizers
Process Category (PROC)	PROC 2: Use in closed and continuous processes with occasional controlled exposure PROC 8a: Transfer of substances or preparations (loading/unloading) to or from ships or large containers in non-specialized installations PROC 8b: Transfer of substances or preparations (loading/unloading) to or from ships or large containers in dedicated facilities PROC 9: Transfer of substances or preparations in small containers (dedicated filling lines, including weighing) PROC 13: Processing of articles by dipping and pouring PROC 19: Manual mixing with close contact and use of only personal protective equipment
Article Category (AC)	Basic Substance
Environmental Emission Category (ERC)	ERC 8b: Indoor wide dispersive use of reactive substances in open systems ERC 8d: Extensive external dispersive use of processing aids in open systems ERC 8e: Extensive external dispersive use of reactive substances in open systems ERC 8e: Extensive external dispersive use of reactive substances in open systems
3 Operating conditions (worst case)	
3.1 Operating conditions relating to use	
Duration and frequency	> 4 hours per day
3.2 Substance-related operating conditions	
Physical form	Liquid (solutions)
Volatility	Low
Substance concentration	> 25% (liquid)
3.3 Other operating conditions that determine exposure	
The activity can be carried out both indoors and outdoors.	
4 Risk management measures	
4.1 Measures relating to workers	Wear safety glasses Good ventilation conditions Wear gloves Proper containment of the substance Minimize the number of exposed personnel Use effective contaminant extraction systems Minimize manual handling Avoid contact with contaminated objects and instruments Regular cleaning of work area and equipment Monitoring of the site to ensure that risk management measures are being implemented Training of personnel on good practices Maintain standard conditions of personal hygiene Information with Safety Data Sheet
4.2 Measures relating to consumers	Not applicable
4.3 Environmental measures	Not available
4.4 Measures relating to waste	Not available
5 Estimated exposure under the conditions described.	
5.1 Worker exposure	
If risk management measures are applied, exposure to the substance is not expected.	
5.2 Consumer exposure	
Not applicable	
5.3 Indirect exposure of people through the environment	
Not available	
5.4 Environmental exposure	
Not implemented	
6 Information for the downstream user to evaluate operating conditions	
Not relevant	

Annexes to the Safety Data Sheet ORGANOVIR-F Exposure Scenario 2

1 Title of the Exposure Scenario	
End use as an agricultural commodity by consumers	
2 Description of the activities or processes covered by the exposure scenario.	
Sector of Use (SU)	SU 21: Uses by consumers: Private residences (general public or consumers)
Product Category (PC)	Basic Substance
Process Category (PROC)	Not available
Article Category (AC)	Not available
Environmental Emission Category (ERC)	ERC 8b: Broad indoor dispersive use of reactive substances in open systems ERC 8e: Extensive outdoor dispersive use of reactive substances in open systems
3 Operating conditions (worst case)	
3.1 Operating conditions relating to use	
Duration and frequency	Not relevant
3.2 Substance-related operating conditions	
Physical form	Liquid (solutions)
Substance concentration	$\geq 0,1\% < 0,1\%$ (p/p)
3.3 Other operating conditions that determine exposure	
Activity carried out both indoors and outdoors	
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