

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

1.1. Product identifier

Product form : Mixture
 Name : FERTILEADER ORIS
 Product code : LEADE016C
 Type of product : Fertilizer
 Product group : Trade product

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

1.2.1. Relevant identified uses

Main use category : Professional use
 Function or use category : Fertilisers

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

TIMAC Agro France
 27 avenue Franklin Roosevelt
 35408 Saint-Malo cedex - FRANCE
 T +33 2 99 20 65 20
info-fds@roullier.com - www.roullier.com

1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number	Comment
Europe/Middle-East/Africa	3E		+1-760-476-3961 (Access code : 333021)	(24/7)
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Centre Hospitalier Universitaire de Constantine	Avonley Road SE14 5ER London	0870 243 2241	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Corrosive to metals, Category 1 H290
 Acute toxicity (oral), Category 4 H302
 Skin corrosion/irritation, Category 1A H314
 Hazardous to the aquatic environment H411
 — Chronic Hazard, Category 2

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) : Danger
 Hazardous ingredients : Phosphoric acid
 Hazard statements (CLP) : H290 - May be corrosive to metals

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Precautionary statements (CLP)	H302 - Harmful if swallowed
	H314 - Causes severe skin burns and eye damage
	H411 - Toxic to aquatic life with long lasting effects
	: P280 - Wear face shield, protective clothing, protective gloves
	P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
	P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
	P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
	P310 - Immediately call a doctor, a POISON CENTER
	P390 - Absorb spillage to prevent material damage

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Phosphoric acid	(CAS No) 7664-38-2 (EC no) 231-633-2 (EC index no) 015-011-00-6 (REACH-no) 01-2119485924-24	15 - 35	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314
Zinc oxide	(CAS No) 1314-13-2 (EC no) 215-222-5 (EC index no) 030-013-00-7 (REACH-no) 01-2119463881-32	6	Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Get medical advice/attention if you feel unwell. Prompt treatment is essential to minimize damage.
First-aid measures after inhalation	: Move to fresh air in case of accidental inhalation. Seek medical attention if ill effect develops.
First-aid measures after skin contact	: For even minor contact, immediately remove contaminated clothing. Wash skin thoroughly with mild soap and water. Do not remove clothing if it sticks to the skin. Get immediate medical advice/attention. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Wash immediately with plenty water (during 20 minutes), also under eyelids. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist immediately, even if there are no immediate symptoms. If possible show him this sheet. Failing this, show him the packaging or label.
First-aid measures after ingestion	: If swallowed, rinse mouth with water (only if the person is conscious). Unconscious: maintain adequate airway and respiration and Place the affected person in the recovery position. Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : (see section(s) : 2.1/2.3).

4.3. Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: water, carbon dioxide (CO ₂), powder and foam. Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Not flammable. Released gases may accelerate the burning of other combustible materials.
Hazardous decomposition products in case of fire	: Thermal decomposition generates : Sulphur oxides. Phosphorus oxides. toxic and corrosive vapours. Ammonia. nitro-compounds.

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5.3. Advice for firefighters

Firefighting instructions	: Control the vapours with a water spray.
Protection during firefighting	: Do not enter or remain in the danger zone without protection clothing. Wearing autonomous, insulating breathing equipment is recommended when entering the danger zone.
Other information	: Avoid pouring fire water down the drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Do not breathe vapour/aerosol. Avoid contact with skin and eyes. Where contact with eyes or skin is likely, wear suitable protection. Refer to protective measures listed in Sections 7 and 8.
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6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Do not allow into drains or water courses.

6.3. Methods and material for containment and cleaning up

For containment	: Neutralize spill with quicklime or soda ash. Mix with an inert absorbent (mineral absorbent, sand or earth; do not use sawdust).
Methods for cleaning up	: Collect waste, store it in polythene containers before having it treated by an approved company. Clean contaminated surfaces with an excess of water.
Other information	: Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Do not breathe spray, vapours. Avoid contact with skin and eyes. Where contact with eyes or skin is likely, wear suitable protection. Concerning personal protective equipment to use, see item 8.
Hygiene measures	: Always wash hands and face immediately after handling this product, and once again before leaving the workplace. If on skin, take off contaminated clothing. Do not drink, eat or smoke in the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Keep out of reach of children.
Storage conditions	: In its original packaging, in a ventilated place, in an area resistant to corrosion, away from frost, at temperatures below 40°C, away from foodstuffs and reactive materials.
Incompatible materials	: Metals.
Prohibitions on mixed storage	: Keep away from food, drink and animal feedingstuffs.
Storage area	: Keep out of frost. Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

(see section(s) : Agriculture. 1.2. Recommended uses and restrictions.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Phosphoric acid (7664-38-2)		
EU	IOELV TWA (mg/m ³)	1 mg/m ³
EU	IOELV STEL (mg/m ³)	2 mg/m ³
EU	Notes	2000/39/EC

Zinc oxide (1314-13-2)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	5 mg/m ³
Acute - local effects, inhalation	0,5 mg/m ³
Long-term - systemic effects, dermal	83 mg/kg bodyweight/day
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	0,83 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	2,5 mg/m ³

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Zinc oxide (1314-13-2)	
Long-term - systemic effects, dermal	83 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0,0206 mg/l
PNEC aqua (marine water)	0,0061 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	235,6 mg/kg dwt
PNEC sediment (marine water)	113 mg/kg dwt
PNEC (Soil)	
PNEC soil	106,8 mg/kg
PNEC (STP)	
PNEC sewage treatment plant	0,1 mg/l
Phosphoric acid (7664-38-2)	
DNEL/DMEL (Workers)	
Long-term - local effects, inhalation	2,92 mg/m ³
DNEL/DMEL (General population)	
Long-term - local effects, inhalation	0,73 mg/m ³

Additional information : No study has been carried out for the moment on this mixture.

8.2. Exposure controls

Personal protective equipment:

Gloves. Safety glasses. Corrosionproof clothing.

Hand protection:

Butyl-rubber protective gloves. Latex gloves. (according to standard EN 374)

Eye protection:

Safety glasses with side guards should be worn to prevent injury from airborne particles and/or other eye contact with this product. (according to standard EN 166)

Skin and body protection:

acid resistant clothing. Rubber boots

Respiratory protection:

No special respiratory protection equipment is recommended under normal conditions of use with adequate ventilation. Full-/Half-/quarter-face masks (DIN EN 136/140). Filtering Half-face mask (DIN EN 149)



Other information:

Handle in accordance with good industrial hygiene and safety practice. Always wash hands and face immediately after handling this product, and once again before leaving the workplace. If on skin, take off contaminated clothing. Do not drink, eat or smoke in the workplace.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: brown.
Odour	: odourless.
Odour threshold	: Not applicable
pH	: 1,8
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: < -1 °C
Boiling point	: > 100 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available

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Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1270 kg/m ³
Solubility	: Water: Miscible in all proportions
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

On burning: release of (highly) toxic gases/vapours, nitro-compounds, Phosphate. Released gases may accelerate the burning of other combustible materials. This product is corrosive to metals.

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Reacts violently with : Strong bases (Exothermic reaction), Reducing agents (Hazardous reactions), Sodium hypochlorite (release of irritant gases/vapours).

10.4. Conditions to avoid

Heat. Gel. Moisture.

10.5. Incompatible materials

Reducing agents. Strong bases. metals.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. In case of fire: See Heading 5.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Oral: Harmful if swallowed.
Additional information	: No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation

ATE CLP (oral)	500,000 mg/kg bodyweight
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Zinc oxide (1314-13-2)	
LD50 oral rat	> 2000 mg/kg (OECD 401 method)
LC50 inhalation rat (mg/l)	(4h) > 5700 mg/m ³ (OECD 403 method)

Phosphoric acid (7664-38-2)	
LD50 oral rat	1530 mg/kg OECD 423
LD50 dermal rabbit	2740 mg/kg
Additional information	Safety Data Sheet Supplier

Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 1,8
Additional information	: No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation
Serious eye damage/irritation	: Serious eye damage, category 1, implicit pH: 1,8
Additional information	: No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation

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Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met) No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation
Specific target organ toxicity (single exposure)	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation
Specific target organ toxicity (repeated exposure)	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation

Phosphoric acid (7664-38-2)

NOAEL (oral, rat, 90 days)	250 mg/kg bodyweight/day
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Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation. Do not allow uncontrolled discharge of product into the environment.
Ecology - water	: Toxic to aquatic life with long lasting effects.

Zinc oxide (1314-13-2)

LC50 fish 1	96h 1,1 - 1,5 ppm Oncorhynchus mykiss (Rainbow trout)
EC50 other aquatic organisms 1	72h 0,17 mg/l algae
NOEC (chronic)	0,017 mg/l algae

Phosphoric acid (7664-38-2)

LC50 fish 1	< 3 - 3,25 mg/l Lepomis macrochirus
EC50 Daphnia 1	48h > 100 mg/l OECD 202
ErC50 (algae)	72h > 100 mg/l Desmodesmus subspicatus OECD 201
NOEC chronic algae	72h 100 ml/l Desmodesmus subspicatus OECD 201

12.2. Persistence and degradability

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Persistence and degradability	No study has been carried out for the moment on this mixture.
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Zinc oxide (1314-13-2)

Persistence and degradability	No data available.
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Phosphoric acid (7664-38-2)

Persistence and degradability	Not applicable.
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12.3. Bioaccumulative potential

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Bioaccumulative potential	No study has been carried out for the moment on this mixture.
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Zinc oxide (1314-13-2)

Log Pow	2,2
Bioaccumulative potential	Low bioaccumulation potential.

Phosphoric acid (7664-38-2)

Log Pow	No data available
Log Kow	No data available
Bioaccumulative potential	There is no bioaccumulation.

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12.4. Mobility in soil

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Ecology - soil	No study has been carried out for the moment on this mixture.
Zinc oxide (1314-13-2)	
Ecology - soil	Material nearly insoluble in water.
Phosphoric acid (7664-38-2)	
Ecology - soil	Not applicable.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other adverse effects : May cause eutrophication at very low concentration. May cause pH changes in aqueous ecological systems.






SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose in a safe manner in accordance with local/national regulations.
 Additional information : Disposal by incineration or reuse of the material through recycling after cleansing of product residues. Recycling or incineration by an approved company.
 Ecology - waste materials : Do not allow into drains or water courses.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
3264	3264	3264	3264	3264
14.2. UN proper shipping name				
CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Transport document description				
UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Phosphoric acid ; Zinc oxide), 8, III, (E), ENVIRONMENTALLY HAZARDOUS	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., 8, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., 8, III, ENVIRONMENTALLY HAZARDOUS	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., 8, III, ENVIRONMENTALLY HAZARDOUS	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., 8, III, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
8	8	8	8	8
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available				

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : C1
 Special provisions (ADR) : 274
 Limited quantities (ADR) : 5I
 Excepted quantities (ADR) : E1
 Packing instructions (ADR) : P001, IBC03, LP01, R001
 Mixed packing provisions (ADR) : MP19

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Portable tank and bulk container instructions (ADR) : T7
Portable tank and bulk container special provisions (ADR) : TP1, TP28
Tank code (ADR) : L4BN
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V12
Hazard identification number (Kemler No.) : 80
Orange plates :



Tunnel restriction code (ADR) : E
EAC code : 2X
APP code : B

- Transport by sea

Special provisions (IMDG) : 223, 274
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P001, LP01
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T7
Tank special provisions (IMDG) : TP1, TP28
EmS No. 1 (Fire) : F-A
EmS No. 2 (Spillage) : S-B
Stowage category (IMDG) : A
Stowage and handling (IMDG) : SW2

- Air transport

No data available

- Inland waterway transport

No data available

- Rail transport

No data available

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

Other information, restriction and prohibition regulations : All the constituents of this preparation are registered in the EINECS inventory or in the ELINCS list.

15.1.2. National regulations

Ensure all national/local regulations are observed

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

For the following substances of this mixture a chemical safety assessment has been carried out

Zinc oxide
Phosphoric acid

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SECTION 16: Other information

Indication of changes:

	Stowage and handling (IMDG)	Added	
	Tank special provisions (IMDG)	Added	
	Tank instructions (IMDG)	Added	
	Special provisions (IMDG)	Added	
	Limited quantities (IMDG)	Added	
	IBC packing instructions (IMDG)	Added	
	Excepted quantities (IMDG)	Added	
	Packing group (RID)	Added	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
2.2	Precautionary statements (CLP)	Modified	
2.2	Hazard pictograms (CLP)	Modified	
2.2	Hazard statements (CLP)	Modified	
4.1	First-aid measures general	Modified	
7.2	Incompatible materials	Added	
7.2	Technical measures	Added	
7.2	Storage area	Added	
7.2	Prohibitions on mixed storage	Added	
7.3	Specific end uses	Added	
8.2	Respiratory protection	Modified	
10.1	Reactivity	Modified	
10.4	Conditions to avoid	Added	
11.1	Additional information	Modified	
11.1	Additional information	Modified	
11.1	Additional information	Added	
11.1	Additional information	Added	
11.1	Reason for no classification	Removed	
11.1	ATE CLP (oral)	Added	
12.1	Ecology - general	Modified	
14.4	Packing group (ADN)	Added	
14.4	Packing group (IATA)	Added	
14.6	Packing instructions (IMDG)	Added	
15.2	Chemical safety assessment	Added	

Data sources : Section 1.2, 8.1, 11 & 12 are based on components' Chemical Safety Report and/or datas from components' supplier.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
H290	May be corrosive to metals
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects

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SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product