

## FLORANID® Starter 18-24-5

Version: 1.0  
Date of last issue: -  
Date of first issue: 26.03.2024

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

#### 1.1 Product identifier

Trade name : FLORANID® Starter 18-24-5

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

Use of the Substance/Mixture : Fertiliser

#### 1.3 Details of the supplier of the safety data sheet

Company : COMPO EXPERT GmbH  
Krögerweg 10  
D-48155 Münster

Telephone : +49 (0) 251 29 79 81 – 000

Telefax : +49 (0) 251 29 79 81 - 111

E-mail address of person responsible for the SDS : info@compo-expert.com

#### 1.4 Emergency telephone number

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

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Long-term (chronic) aquatic hazard, Category 3      H412: Harmful to aquatic life with long lasting effects.

#### 2.2 Label elements

##### Labelling (REGULATION (EC) No 1272/2008)

Hazard statements : H412      Harmful to aquatic life with long lasting effects.

Precautionary statements : **Disposal:**  
P501      Dispose of contents/ container to an approved waste disposal plant.

# Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006



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### 2.3 Other hazards

None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : NPK - fertilizer contains:  
N,N'-(2-Methylpropyliden)-bis-urea  
methylene urea  
manganese sulphate  
iron sulfate  
zinc sulphate

#### 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
manganese sulphate	7785-87-7  232-089-9  01-2119456624-35-XXXX	STOT RE 2; H373 Aquatic Chronic 2; H411 Eye Dam. 1; H318	< 1,6
iron (II) sulfate	7720-78-7  231-753-5  01-2119513203-57-XXXX	Acute Tox. 4; H302 Eye Irrit. 2; H319 Skin Irrit. 2; H315  Acute toxicity estimate  Acute oral toxicity: 500 mg/kg	< 3,5

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zinc oxide	1314-13-2 215-222-5 01-2119463881-32-XXXX	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	<= 2
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For explanation of abbreviations see section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- General advice : Wash hands with water as a precaution.
- If inhaled : Move to fresh air in case of accidental inhalation of fumes from overheating or combustion.  
Obtain medical attention.  
In case of lung irritation, first treatment with dexametason aerosol (spray).
- In case of skin contact : Wash off with plenty of 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.  
Call a physician immediately.

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

- Symptoms : Ingestion may provoke the following symptoms:  
Methaemoglobinemia  
Inhalation of decomposition products in high concentration may cause shortness of breath (lung oedema).

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

- Treatment : Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

- Suitable extinguishing media : Water
- Unsuitable extinguishing : Foam

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media	Dry chemical Carbon dioxide (CO <sub>2</sub> ) Sand
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### 5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting	: Can decompose at above 100 °C. Thermal decomposition products: Nitrogen monoxide, nitrogen dioxide, dinitrogenoxide, ammonia Isobutyraldehyd
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### 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.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	: Keep away from children.
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### 6.2 Environmental precautions

Environmental precautions	: Do not flush into surface water or sanitary sewer system. Retain and dispose of contaminated wash water.
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### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up	: Use mechanical handling equipment.
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### 6.4 Reference to other sections

none

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## SECTION 7: Handling and storage

### 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 sources of ignition - No smoking. Keep away from combustible materials. Keep away from heat. Risk of explosion if heated under confinement.

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Hygiene measures : Wash hands before breaks and at the end of workday.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : When stored loose do not mix with other fertilizers. Store well away from other substances. Keep away from direct sunlight. Protect against heat. Protect from contamination. Protect from moisture.

Storage class (TRGS 510) : 13, Non Combustible Solids

Dampness : Keep in a dry place.

### 7.3 Specific end use(s)

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
manganese sulphate	7785-87-7	(Inhalable fraction)	0,5 mg/m <sup>3</sup>	DE TRGS 900
Further information	Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission)., The threshold value is based on the element content of the corresponding metal., When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
		AGW (Inhalable fraction)	0,5 mg/m <sup>3</sup> (Manganese)	DE TRGS 900
Further information	Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission)., The threshold value is based on the element content of the corresponding metal., When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
			0,5 mg/m <sup>3</sup>	
iron (II) sulfate	7720-78-7	TWA	1 mg/m <sup>3</sup> (Iron)	GB EH40
zinc oxide	1314-13-2		2 mg/m <sup>3</sup>	
Contains no substances with occupational exposure limit values.				
Mangansulfat	7785-87-7, 7785-87-7	manganese: 20 µg/l (Blood)	Immediately after exposure or after working hours, In case of long-term exposition: after	TRGS 903

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			more than one shift
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### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
ammonium nitrate	Workers	Inhalation	Long-term systemic effects	36 mg/m <sup>3</sup>
	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
iron (II) sulfate	Consumers	Inhalation	Long-term systemic effects	8,9 mg/m <sup>3</sup>
	Consumers	Skin contact, Ingestion	Long-term systemic effects	2,56 mg/kg bw/day
	Workers	Skin contact	Acute effects, systemic effects	2,8 mg/kg
Remarks:	Exposure time: 24 h			
	Workers	Inhalation	Acute effects, systemic effects	9,9 mg/m <sup>3</sup>
	Workers	Skin contact	Chronic effects, systemic effects	2,8 mg/kg
Remarks:	Exposure time: 24 h			
	Workers	Inhalation	Chronic effects, systemic effects	9,9 mg/m <sup>3</sup>
	Consumers	Ingestion	Acute effects, systemic effects	1,4 mg/kg
Remarks:	Exposure time: 24 h			
	Consumers	Skin contact	Acute effects, systemic effects	1,4 mg/kg
Remarks:	Exposure time: 24 h			

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	Consumers	Inhalation	Acute effects, systemic effects	2,5 mg/m <sup>3</sup>
	Consumers	Ingestion	systemic effects, Chronic effects	1,4 mg/kg
Remarks:	Exposure time: 24 h			
	Consumers	Skin contact	Chronic effects, systemic effects	1,4 mg/kg
Remarks:	Exposure time: 24 h			
	Consumers	Inhalation	Chronic effects, systemic effects	2,5 mg/m <sup>3</sup>
zinc oxide	Workers	Inhalation	Long-term exposure	5 mg/m <sup>3</sup>
	Workers	Ingestion	Long-term exposure, Systemic effects	0,8 mg/kg
	Workers	Skin contact	Long-term exposure, Systemic effects	83 mg/kg

### 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
iron (II) sulfate	Water	
Remarks:	This product has no known ecotoxicological effects.	
	Behaviour in waste water treatment plants	2483 mg/l
	Fresh water sediment	246000 mg/kg
	Marine sediment	246000 mg/kg
	Soil	276000 mg/kg
zinc oxide	Fresh water	0,0206 mg/l
	Marine water	0,0061 mg/l
	Derivation of the PNEC, Zinc	
	Fresh water sediment	235,6 mg/l

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	Derivation of the PNEC, Zinc	
	Marine sediment	113 mg/l
	Derivation of the PNEC, Zinc	
	Soil	106,8 mg/l
	Derivation of the PNEC, Zinc	
	Behaviour in waste water treatment plants	0,052 mg/l
	Derivation of the PNEC, Zinc	

### 8.2 Exposure controls

#### Personal protective equipment

Eye protection : In case of dust formation:  
Tightly fitting safety goggles

#### Hand protection

Material : Gloves

Skin and body protection : No special protective equipment required.

Respiratory protection : Breathing apparatus only if aerosol or dust is formed.

#### Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.  
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 : odourless



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Odour Threshold	: No data available
pH	: ca. 6,2, Concentration: 100 g/l (20 °C)
Melting point/range	: No data available
Boiling point/boiling range	: Not applicable
Flash point	: Not relevant
Evaporation rate	: Not applicable
Flammability (solid, gas)	: The product is not flammable.
Upper explosion limit	: Not applicable
Lower explosion limit	: Not applicable
Vapour pressure	: Not applicable
Relative vapour density	: Not applicable
Bulk density	: ca. 860 kg/m <sup>3</sup>
Solubility(ies)	
Water solubility	: soluble
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: Not applicable
Viscosity	
Viscosity, dynamic	: Not applicable
Viscosity, kinematic	: Not applicable
Explosive properties	: Not explosive
Oxidizing properties	: Not applicable
<b>Particle characteristics</b>	
Particle Size Distribution	: D50 = 1,2 mm D50 Tolerance range = 0,9 mm - 1,5 mm Measurement technique: Optoelectronic measurement method

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### 9.2 Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Stable under recommended storage conditions.

### 10.2 Chemical stability

No decomposition if stored and applied as directed.  
Decomposes on heating.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Evolution of ammonia under influence of alkalis.

### 10.4 Conditions to avoid

Conditions to avoid : Keep away from heat and sources of ignition.

### 10.5 Incompatible materials

Materials to avoid : oxidizable substances  
Strong acids and strong bases

### 10.6 Hazardous decomposition products

Hazardous decomposition products : Nitrogen monoxide, nitrogen dioxide, dinitrogenoxide,  
ammonia  
Isobutyraldehyd

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

##### Product:

Acute oral toxicity : Remarks: Based on available data, the classification criteria are not met.

Acute dermal toxicity : Remarks: Based on available data, the classification criteria are not met.

##### Components:

##### **ammonium nitrate:**

Acute oral toxicity : LD50 (Rat): > 2.950 mg/kg  
Method: OECD Test Guideline 401

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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

### **manganese sulphate:**

Acute oral toxicity : LD50 (Rat): 2.150 mg/kg

### **iron (II) sulfate:**

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 401

LD50 (Rat): 657 - 4.390 mg/kg  
Method: Calculation method

Acute toxicity estimate: 500 mg/kg  
Method: Converted acute toxicity point estimate

Acute inhalation toxicity : Remarks: This information is not available.

Acute dermal toxicity : LD50 (Rat): > 1.992 mg/kg  
Method: Converted acute toxicity point estimate

### **zinc oxide:**

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5,7 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour

Acute dermal toxicity : Remarks: No data available

### **Skin corrosion/irritation**

#### **Product:**

Remarks: Based on available data, the classification criteria are not met.

#### **Components:**

##### **ammonium nitrate:**

Species: Rabbit  
Method: OECD Test Guideline 404  
Result: non-irritant

##### **iron (II) sulfate:**

Method: OECD Test Guideline 404  
Result: Skin irritation  
Remarks: Irritating to skin and mucous membranes

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### **zinc oxide:**

Remarks: non-irritant

### **Serious eye damage/eye irritation**

#### **Product:**

Species: Rabbit

Method: OECD Test Guideline 405

Result: non-irritant

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

#### **Components:**

##### **ammonium nitrate:**

Species: Rabbit

Method: OECD Test Guideline 405

Result: Irritant

##### **iron (II) sulfate:**

Method: OECD Test Guideline 405

Result: Eye irritation

##### **zinc oxide:**

Method: OECD Test Guideline 405

Remarks: non-irritant

### **Respiratory or skin sensitisation**

#### **Product:**

Remarks: Based on available data, the classification criteria are not met.

#### **Components:**

##### **ammonium nitrate:**

Result: Does not cause skin sensitisation.

##### **iron (II) sulfate:**

Method: OECD TG 429

Result: Did not cause sensitisation on laboratory animals.

##### **zinc oxide:**

Method: OECD Test Guideline 406

Remarks: Did not cause sensitisation on laboratory animals.

### **germ cell mutagenicity**

#### **Product:**

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Genotoxicity in vitro : Remarks: Based on available data, the classification criteria are not met.

### **Components:**

#### **ammonium nitrate:**

Genotoxicity in vitro : Method: OECD Test Guideline 471  
Result: negative

#### **zinc oxide:**

Germ cell mutagenicity-  
Assessment : In vivo tests did not show mutagenic effects

### **Carcinogenicity**

#### **Product:**

Remarks: Based on available data, the classification criteria are not met.

### **Components:**

#### **ammonium nitrate:**

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

#### **iron (II) sulfate:**

Carcinogenicity -  
Assessment : Did not show carcinogenic, teratogenic or mutagenic effects in  
animal experiments.

#### **zinc oxide:**

Carcinogenicity -  
Assessment : According to experience not expected

### **Reproductive toxicity**

#### **Product:**

Effects on fertility :  
Remarks: Based on available data, the classification criteria  
are not met.

### **Components:**

#### **ammonium nitrate:**

Effects on fertility : Species: Rat  
Remarks: Animal testing did not show any effects on fertility.

Effects on foetal  
development : Species: Rat  
Remarks: Did not show teratogenic effects in animal

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experiments.

**zinc oxide:**

Reproductive toxicity - Assessment : No toxicity to reproduction  
No experimental indication of genotoxic effects.

**STOT - single exposure**

**Product:**

Remarks: Based on available data, the classification criteria are not met.

**Components:**

**zinc oxide:**

Remarks: This information is not available.

**STOT - repeated exposure**

**Product:**

Remarks: Based on available data, the classification criteria are not met.

**Components:**

**iron (II) sulfate:**

Remarks: No known effect.

**zinc oxide:**

Remarks: No known effect.

**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.

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### iron (II) sulfate:

Species: Rat  
NOAEL: 284 - 324 mg/kg  
Application Route: Oral  
Exposure time: 90 d  
Remarks: Information given is based on data obtained from similar substances.

Species: Rat  
NOAEL: 100 mg/kg  
Application Route: Oral  
Exposure time: 49 d

Application Route: by inhalation  
Remarks: This information is not available.

Application Route: Dermal  
Remarks: This information is not available.

### Aspiration hazard

Based on available data, the classification criteria are not met.

## 11.2 Information on other hazards

### Endocrine disrupting properties

No data available

### Further information

#### Product:

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

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: Directive 84/449/EEC, C.2
Toxicity to algae	: EC50 (Scenedesmus subspicatus): > 100 mg/l

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Exposure time: 72 h  
Method: DIN 38412

### **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

#### **manganese sulphate:**

- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 30 mg/l

#### **iron (II) sulfate:**

- Ecotoxicology Assessment Short-term (acute) aquatic hazard : This product has no known ecotoxicological effects.

#### **zinc oxide:**

- Toxicity to fish : LC50 (Fish): 0,14 mg/l  
Exposure time: 96 h  
Test Type: static test
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2,2 mg/l  
Exposure time: 48 h  
Test Type: static test
- Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 0,17 mg/l  
Exposure time: 72 h  
Test Type: static test

## 12.2 Persistence and degradability

### **Product:**

- Biodegradability : Remarks: No data available
- Physico-chemical removability : DOC reduction  
ca. 85 %  
Method: OECD 301E/92/69/EWG, C.4-B  
Remarks: Readily eliminated from water



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### **Components:**

#### **ammonium nitrate:**

Biodegradability : Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

#### **iron (II) sulfate:**

Biodegradability : Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

#### **zinc oxide:**

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

#### **Product:**

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

#### **Components:**

##### **ammonium nitrate:**

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: -3,1

##### **iron (II) sulfate:**

Bioaccumulation : Remarks: Accumulation in aquatic organisms is unlikely.

### 12.4 Mobility in soil

#### **Product:**

Mobility : Remarks: No data available

Distribution among environmental compartments : Remarks: Moderately mobile in soils

#### **Components:**

##### **iron (II) sulfate:**

Distribution among environmental compartments : Medium:Soil  
Remarks: immobile

### 12.5 Results of PBT and vPvB assessment

#### **Product:**

Assessment : Remarks: Not applicable

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### Components:

#### **iron (II) sulfate:**

Assessment : Substance is not very persistent and very bioaccumulative (vPvB).. Substance is not persistent, bioaccumulative, and toxic (PBT)..

#### **zinc oxide:**

Assessment : Non-classified PBT substance.

### 12.6 Endocrine disrupting properties

No data available

### 12.7 Other adverse effects

#### Product:

Additional ecological information : Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.  
There is a high probability that the product is acute not harmful to aquatic organisms.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Do not flush into surface water or sanitary sewer system.  
Dispose of in accordance with local regulations.

Contaminated packaging : Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

## SECTION 14: Transport information

### 14.1 UN number or ID 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

Segregation group : : (-)

Not regulated as a dangerous good

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### 14.5 Environmental hazards

Not regulated as a dangerous good

### 14.6 Special precautions for user

Not applicable

### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

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## SECTION 15: Regulatory information

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

Other regulations : This product is subject to Regulation (EU) 2019/1148; suspicious transactions, disappearance or theft of the product must be reported to the relevant authority.

### 15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this product.

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## SECTION 16: Other information

### Full text of H-Statements

H272 : May intensify fire; oxidizer.  
H302 : Harmful if swallowed.  
H315 : Causes skin irritation.  
H318 : Causes serious eye damage.  
H319 : Causes serious eye irritation.  
H373 : May cause damage to organs through prolonged or repeated exposure.  
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.

### Full text of other abbreviations

Acute Tox. : Acute toxicity  
Aquatic Acute : Short-term (acute) aquatic hazard  
Aquatic Chronic : Long-term (chronic) aquatic hazard  
Eye Dam. : Serious eye damage  
Eye Irrit. : Eye irritation  
Ox. Sol. : Oxidizing solids  
Skin Irrit. : Skin irritation  
STOT RE : Specific target organ toxicity - repeated exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation;

# Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006

## FLORANID® Starter 18-24-5



Version: 1.0  
Date of last issue: -  
Date of first issue: 26.03.2024

Revision Date:  
26.03.2024

Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; 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; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; 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; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; 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; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECL - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### 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 to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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