



Chemical and Agricultural Industry, Research S.A.

## SAFETY DATA SHEET

### AVANTAGE 18-18-18

#### 1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

##### 1.1 Identification of the Product

Designation	Powder balanced fertilizer- fast acting -foliar or soil applied. NPK (18-18-18) + trace elements
Trade name	<b>AVANTAGE 18-18-18</b>

##### 1.2 Product use

Product Use	Recommended for all the growing stages of fruit trees, vegetables and ornamentals. Suitable for all soil types and for all environmental conditions (cold and hot weather).
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##### 1.3 Company details

Vioryl s.a. 28 <sup>th</sup> km Athens-Lamia National Road,19014 Afidnes, GREECE	Tel. +30 22950-45100
	Fax : +30 22950 45250
	Email <a href="mailto:agrochemical@vioryl.gr">agrochemical@vioryl.gr</a>

**1.4 Emergency telephone number:** +30 22950 45100  
In case of poisoning call: +30 210 7793777

#### 2. HAZARDS IDENTIFICATION

##### 2.1 Classification

Classification according to Directive 67/548/EC, the Directive 1999/45/EC and the Regulation (EC) 1272/2008 : Not regulated as hazardous material.

##### 2.2 Labeling

**According to Directive 67/548/EEC or Directive 1999/45/EC:**

**Safety phrases:**

**S1/2:** Keep locked up and out of reach of children.

**S13:** Keep away from food, drink and animal feedingstuffs.

**S24/25:** Avoid contact with skin and eyes.

**Regulation (EC) 1272/2008:**

**P phrases:**

**P102:** Keep out of reach of children.

**P405:** Store locked up.

**P262:** Do not get in eyes, on skin, or on clothing.

### 3. **COMPOSITION/INFORMATION ON INGREDIENTS**

#### 3.1 **Composition**

<b><u>Composition</u></b>	Content %	Directive 67/548/EC 1999/45/EC	Regulation (EC) 1272/2008
Total nitrogen (N)	18,3	--	--
Nitric Nitrogen (NO <sub>3</sub> )	0		
Ammoniac Nitrogen (NH <sub>4</sub> )	3.4		
Urea Nitrogen	14.9		
Total phosphorus (P2O5)	18.3		
Water soluble phosphorus (P2O5)	18.3		
Total potash (K2O)	18.3		
Water soluble potash (K2O)	18.3		

#### 4. **FIRST AID MEASURES**

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.

**Skin:** Flush skin with plenty of water while removing contaminated clothing and shoes.

**Ingestion:** Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**Inhalation:** Remove from exposure and move to fresh air.

**Long-term effects:** no adverse effect has been reported.

**Thermal decomposition products:** Inhalation of decomposition gases can cause irritation to the respiratory system. When heated urea decomposes and releases ammonia. In case of fire, toxic fumes can be released.

#### 5. **FIRE FIGHTING MEASURES**

##### 5.1 **If the fertilizer is not directly involved in the fire**

Use the best available means to limit fire.

##### 5.2 **If the product is exposed to fire**

Prevent any contamination with oils or other combustible materials. When exposed to fire or at very high temperatures, the components of this product may produce vapors and toxic gases. Especially saltpeter may ignite and support fire.

#### 6. **ACCIDENTAL RELEASE MEASURES**

-Any spillage of the product should be cleaned immediately wiped dry and placed in a clean container for safe disposal.

-Never mix the product with sawdust and various combustible or organic substances.

-Depending on the extent and nature of the infection and get rid of the product in special places.

-Pay special attention to prevent water pollution with dense compost. Inform responsible authorities in case of accidental contamination of water

#### 7. **HANDLING and STORAGE**

##### 7.1 **Handling**

-Avoid unnecessary inhalation of the product.

-Do not blend the product with other incompatible materials.

-Wear gloves when handling the product..

##### 7.2 **Storage**

-Keep away from sources of heat or fire.

-Keep away from combustible materials and substances

-In-store, make sure that the product is not close to hay, straw, wheat, oils, etc.

-Keep storage area clean.

-Do not allow smoking and the use of flame uncovered storage areas.

-The building used for the storage of the product should be dry and well ventilated.

-Store at room temperature.

## 8. **EXPOSURE CONTROLS, PERSONAL PROTECTION**

### 8.1 **Exposure Limits**

According to ACGIH (1995-96) for respirable particulate: TLV / TWA: 10mg/m<sup>3</sup>

### 8.2 **Prevention**

Avoid unnecessary inhalation and provide the required ventilation where necessary.

### 8.3 **Personal protection**

Wear suitable gloves when handling the product for a long time.

Wear protective safety glasses.

After using the product, wash your hands.

## 9. **PHYSICAL AND CHEMICAL PROPERTIES**

Physical State:	crystal powder
Color:	blue
Odor:	salty
pH:	slightly acidic in aqueous solution
Boiling Point:	N/A
Freezing point	N/A
Explosion Limits, lower:	N/A
Explosion Limits, upper:	N/A
Solubility in water:	Totally soluble in cold water
Specific Gravity/Density:	900-1100kg/m <sup>3</sup>
Explosive properties	Not explosive in accordance with the test A14 (67/548/EC).
Oxidizing properties	Not classified as oxidizing material according to Directive 88/379/EC.

## 10. **STABILITY AND REACTIVITY**

### 10.1 **Chemical Stability**

The product is stable under normal conditions of storage and proper handling

### 10.2 **Conditions to Avoid**

- Do not do blends with incompatible materials.
- Avoid unnecessary exposure of the product to the atmosphere.
- Do not store near heat sources.
- Do not heat above 100°

### 10.3 **Compatibility**

Do not combine with dense oily products and alkaline products

### 10.4 **Hazardous Polymerization**

Not reported.

### 10.5 **Reactions/Dangerous decomposition products**

When heated to a very high temperature, it melts and releases toxic fumes of ammonia, phosphorus, and sulfur oxide, carbon monoxide and carbon dioxide.

When contacted with an alkaline material, can emit ammonia gas.

## 11. **TOXICOLOGICAL INFORMATION**

11.1 **General** See section 3.1.

### 11.2 **Toxicity**

Potassium nitrate: oral toxicity LD<sub>50</sub> (oral, rat) > 2000 mg / kg

urea: LD<sub>50</sub> (oral, rat) > 2000 mg / kg

the MAP: LD<sub>50</sub> (oral, rat) > 2000 mg / kg

## **12. ECOLOGICAL INFORMATION**

### **12.1 Mobility in soil**

NO<sub>3</sub> - is mobile and NH<sub>4</sub><sup>+</sup> is adsorbed by soil particles. Phosphorus moves in the ground shortly and then immobilizes. Potassium is absorbed mainly by the particles of clay, or remains as K<sup>+</sup> in soil and practically immobilized.

### **12.2 Persistence and degradability**

The nitrogen follows the natural cycle of nitrification/denitrification to give oxides of nitrogen.

Phosphorus binds to soil organic matter.

Potassium is absorbed mainly by clay particles, or remain as K<sup>+</sup> in the soil.

### **12.3 Bioaccumulation**

This product shows no bioaccumulation phenomena.

### **12.4 Ecotoxicity**

The product is a fertilizer. Only the release of large quantities of fertilizer in an area may alter the nutrient composition of the soil and affect the ecological chain. It is used in small doses and limited total quantities therefore there is no risk of ecotoxicity.

## **13. DISPOSAL CONSIDERATIONS**

Dispose of in a manner consistent with federal, state, and local regulations no more than 100kg/hectare on fields or specific treatment plants.

## **14. TRANSPORT INFORMATION**

Not classified as hazardous material, according to the international transport codes eg RID (rail), ADR (road) and IMDG (sea).

## **15. REGULATORY INFORMATION**

Classification according to Directive 1999/45/EC, the Directive 67/548/EC and Regulation 1272/2008EC.

## **16. OTHER INFORMATION**

The information in this Safety Data Sheet is given in good faith and belief in its accuracy based on our knowledge of the substance/preparation concerned at the date of publication. It does not imply the acceptance of any legal liability or responsibility whatsoever by the Company for the consequences of its use or misuse in any particular circumstances.

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