



**MATERIAL SAFETY DATA SHEET**  
**In accordance with the Regulation on Safety Data**  
**Sheets Regarding Hazardous Substances and**  
**Mixtures published in the Official Journal**  
**numbered 29204 on December 13, 2014 (R.G.**  
**13.12.2014-29204)**

**AGROBİGEN Plant Nutrient for Flowering Plants**  
**(Solid, powder) (N.P<sub>2</sub>O<sub>5</sub>.K<sub>2</sub>O+me : 14.16.22+me)**

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE**  
**COMPANY/UNDERTAKING**

**1.1. Identification of the substance/mixture and of the company/undertaking**

Product Name : AGROBİGEN Plant Nutrient for Flowering Plants (Solid,  
powder) (N.P<sub>2</sub>O<sub>5</sub>.K<sub>2</sub>O+me : 14.16.22+me)

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

Intended Uses : The product is used as fertilizer.

**1.3. Details of the supplier of the safety data sheet**

Manufacturer Name : ECOBİGEN Gübre Tarım Gıda Tic. San. Ltd. Şti

Address : Alparslan Mah. Samsun 1.Sok. No.13 Bafra, Samsun,  
TURKEY

Telephone : +90 362 365 95 82

Web Address : [www.ecobigen.com.tr](http://www.ecobigen.com.tr)

E-Mail Address : [info@ecobigen.com.tr](mailto:info@ecobigen.com.tr)

Distributor Name : AGROBİGEN Araştırma ve Geliştirme Tic. Ltd. Şti.

Address : Samsun Technopark, Körfez Mah.19 Mayıs Kümesi Küme  
Evleri 188/1, Atakum, Samsun, TURKEY

Telephone : +90 362 502 04 82

Web Address : [www.agrobigen.com.tr](http://www.agrobigen.com.tr)

E-Mail Address : [info@agrobigen.com.tr](mailto:info@agrobigen.com.tr)

Contact Person : Rıdvan KIZILKAYA

Contact Number : +90537 6203234



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#### 1.4. Emergency telephone number

Emergency Telephone Number: +90 362 365 95 82

UZEM : 114

### SECTION 2: HAZARD IDENTIFICATION

#### 2.1 Classification of the substance or mixture

Oxidizing Solids Category 3; H272

Skin Corrosion/Irritation Category 2; H315

Eye Damage/Irritation Category 1; H318

Hazardous To The Aquatic Environment - Long-Term Hazard Category 2; H411

#### 2.2 Label elements

Hazard pictograms (SEA):



Signal word (SEA): Danger, Warning

Hazard statements (SEA):

H272: May intensify fire; oxidizer.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H411: Toxic to aquatic life with long lasting effects.

GHS Code: GHS03, GHS05, GHS09

Precautionary statements (SEA):

P210: Keep away from heat.

P273: Avoid release to the environment.

P280: Wear protective gloves/eye protection/face protection.

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P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P370 + P378: In case of fire: Use carbon dioxide foam, water spray or dry chemical extinguishers. to extinguish.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations (to be specified).

### 2.3 Other hazards

Other effects are mentioned on Section 16.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Composition/information on ingredients

AGROBIGEN Plant Nutrient for Flowering Plants (Solid, powder) (N.P<sub>2</sub>O<sub>5</sub>.K<sub>2</sub>O+me : 14.16.22+me) includes chemical raw materials.

### 3.2 Information on Ingredients

Raw Materials Chemical Name	CAS Number	EINECS/ELINCS Number	Concentration (%)	Hazard Class
Potassium Nitrate	7757-79-1	231-818-8	≤50	Ox. Sol. 3 H272
Iron Sulphate	7782-63-0	231-753-5	≤3	Acute Tox. 4 * H302 Skin Irrit. 2; H315: C ≥ 25 % Eye Irrit. 2 H319
Zinc Sulphate	7446-19-7	231-793-3	≤3	Acute Tox. 4 * H302 Eye Dam. 1 H318 Aquatic Acute 1 H400 Aquatic Chronic 1 H410
Manganese Sulphate	7785-87-7	232-089-9	≤2,5	STOT RE 2 * H373 Aquatic Chronic 2 H411
Boric Acid	10043-35-3	233-139-2	≤2	Repr. 1B; H360FD: C ≥ 5,5 %



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**SECTION 4: FIRST AID MEASURES**

**In case of eye contact** : Rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If need get medical advice/attention.

**In case of skin contact** : Clean skin with soap and plenty of water.

**If swallowed** : Rinse mouth with water. Call a Poison Center or get medical advice/attention.

**If inhaled** : Remove person to fresh air and keep comfortable for breathing.

**SECTION 5: FIREFIGHTING MEASURES**

**5.1. Extinguishing media**

Carbon dioxide foam, water spray or dry chemical extinguishers.

**5.2. Special hazards arising from the substance or mixture**

Avoid contact with other combustible materials.

**5.3. Advice for firefighters**

Use NIOSH-approved respirator including the full face and eye protection and wear rubber gloves.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective equipments which are mentioned on Section 8.

**6.2. Environmental precautions**

Keep out off overground and underground waters.

**6.3. Methods and materials for containment and cleaning up**

Absorb spills with inert material and put chemicals into waste containers.

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#### **6.4. Reference to other sections**

Reference to other sections are mentioned on Section 13.

### **SECTION 7: HANDLING AND STORAGE**

#### **7.1. Precautions for safe handling**

Keep away from heat/sparks/open flames/hot surfaces. Store in a cool and dry place. It should not be exposed to direct sunlight. Keep away from extreme heat. Avoid formation of dust and aerosols. Avoid exposure

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

Keep away from heat/sparks/open flames/hot surfaces. Store in tightly closed containers. Store in a cool and dry place away from nonconcurrent materials. Keep container tightly closed in a dry and well-ventilated place.

#### **7.3. Specific end use(s)**

There is not use of the product other than that specified in Section 1.2.

### **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### **8.1. Control parameters**

No data available.

#### **8.2. Exposure controls**

##### **8.2.1. Appropriate engineering controls**

No data available.

##### **8.2.2. Personal protective equipment**

Eye/face protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

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Skin protection : Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.

Respiratory protection : Wear respiratory protective mask (type N100 (US) or type P3 (EN 143) during operation.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1. Information on basic physical and chemical properties**

Appearance : Solid

Colour : White

Odour : Odourless

pH (1:10) : 3-4

Melting point/freezing point : Not available

Flash point : Not available

Initial boiling point : Not available

Solubility : Soluble in water, acids

Viscosity : Not available

Bulk density (g/cm<sup>3</sup>) : 0.70-1.05

Heavy metal contents : <5 ppm Co  
 <1 ppm Cr  
 <1 ppm Ni  
 <1 ppm Pb  
 <1 ppm Cd

Plant Nutrient Contents : 14% Nitrogen (N)

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16% Phosphorus (P<sub>2</sub>O<sub>5</sub>)

22% Potassium (K<sub>2</sub>O)

0.8% Iron (Fe)

0.9% Zinc (Zn)

0.7% Manganese (Mn)

0.2% Boron (B)

## 9.2. Other safety information

Other information is not available.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

Not available.

### 10.2. Chemical stability

The product is stable under normal conditions during transportation, storage and use.

### 10.3. Possibility of hazardous reactions

Not available.

### 10.4. Conditions to avoid

Exposure to moisture.

### 10.5. Incompatible materials

Strong reducing agents, strong acids, strong bases.

### 10.6. Hazardous decomposition products

Hazardous decomposition products formed under fire conditions: Carbon oxides, oxides of potassium, Borane/boron oxides

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**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

*Potassium Nitrate*

Acute Toxicity Data oral/rat: lethal dose (50 percent kill): 1901 mg/kg

[Ref: [www.pubchem.ncbi.nlm.nih.gov](http://www.pubchem.ncbi.nlm.nih.gov)]

*Zinc Sulphate*

LD50 (108 mg/kg)

[Ref: [www.inchem.org](http://www.inchem.org)]

*Manganese Sulphate*

LD50 oral rat 2150 mg/kg

[Ref: Manganese Sulfate Safety Data Sheet, Southern Agricultural Insecticides, Inc.]

*Boric Acid*

LD50 Oral 3450 mg/kg

LD50 Dermal >2000 mg/kg

[Ref: [www.echa.europa.eu](http://www.echa.europa.eu)]

*Mixture*

Acute toxicity : Not classified

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

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STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

**SECTION 12: ECOLOGICAL INFORMATION**

*Zinc Sulphate*

Fish toxicity

LC50 (96 hr) cichlid 13 ppm (DOSE, 1994).

[Ref: [www.inchem.org](http://www.inchem.org)]

*Boric Acid*

LC50 - *Ptychocheilus lucius* - 279 mg/l - 96 h (fish)

EC50 - *Daphnia magna* (Supiresi) - 133 mg/l - 48 h

*Mixture*

Ecology - general : Not classified

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

**12.3 Bioaccumulative potential**

No data available.

**12.4 Mobility in soil**

No data available.

**12.5 Results of PBT and vPvB assessment**

No data available.

**12.6 Other adverse effects**

Another negative effect is not expected.

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**SECTION 13: DISPOSAL CONSIDERATION**

**13.1. Disposal considerations**

Dispose of waste in accordance with national legislation.

Dispose of package in accordance with national legislation.

**SECTION 14: TRANSPORT INFORMATION**

RID: 1479 Oxidizing Solid, N.O.S.

ADR: 1479 Oxidizing Solid, N.O.S.

ADNR:-

IMDG Code: 1479 Oxidizing Solid, N.O.S.

ICAO-TI:-

IATA-DGR 1479 Oxidizing Solid, N.O.S.

**14.1 UN number**

1479

**14.2 UN proper shipping name**

Oxidizing Solid, N.O.S.

**14.3. Transport hazard class(es)**

5.1; O2



**14.4. Packaging group**

III

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#### 14.5. Environmental hazards

Toxic to aquatic life with long lasting effects.

#### 14.6. Special precautions for user

No data available.

#### 14.7. MARPOL 73/78 Annex II and IBC Code

No data available.

### SECTION 15: REGULATORY INFORMATION

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

- Regulation on Safety Data Sheets Regarding Hazardous Substances and Mixtures published in the Official Journal numbered 29204 on December 13, 2014
- Globally Harmonized System Of Classification And Labelling Of Chemicals (Ghs), ST/SG/AC.10/30/Rev.4
- Regulation on Restriction and Prohibition of Hazardous Substances and Mixtures published in the Official Journal numbered 27092 on December 26, 2008

### SECTION 16: OTHER INFORMATION

Hazard pictograms (SEA):



Signal word (SEA): Danger, Warning

Hazard statements (SEA):

H272: May intensify fire; oxidizer.

H315: Causes skin irritation.

H318: Causes serious eye damage.

H411: Toxic to aquatic life with long lasting effects.

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GHS Code: GHS03, GHS05, GHS09

Precautionary statements (SEA):

*Prevention*

P210: Keep away from heat.

P220: Keep/Store away from clothing/.../combustible materials.

P221: Take any precaution to avoid mixing with combustibles/...

P264: Wash with plenty of water thoroughly after handling.

P273: Avoid release to the environment.

P280: Wear protective gloves/eye protection/face protection.

*Response*

P302 + P352: IF ON SKIN: Wash with plenty water.

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 POISON CENTER/doctor.

P321: Specific treatment (see ... on this label).

P332 + P313: If skin irritation occurs: Get medical advice/attention.

P362 + P364: Take off contaminated clothing and wash it before reuse.

P370 + P378: In case of fire: Use carbon dioxide foam, water spray or dry chemical extinguishers. to extinguish.

P391: Collect spillage.

*Disposal*

P501: Dispose of contents/container in accordance with local/regional/national/international regulations (to be specified).

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Appendix

2020. All rights reserved. Although it is believed that the information contained in the safety data sheet is correct, it can not be claimed that it involves all the details. The information should be used as a guideline and should not be construed as a guarantee given about the product specifications.

***Details of MSDS Preparer:***

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