Technical Specifications nr 01.2023

I. Name of the product

trade name: **O-80**

II. Classification:

PFC 1(B)(II): LIQUID ORGANIC-MINERAL FERTILIZER

III. Parametry:

Parameter	**Value**
Total nitrogen (N) content	5,2% (m/m)
Ammonium nitrogen (N) content	0,6% (m/m)
Amide nitrogen (N) content	4,6% (m/m)
Total phosphorus content, calculated as phosphorus pentoxide (P_2O_5)	2,8% (m/m)
Content of water-soluble phosphorus expressed as phosphorus pentoxide (P_2O_5)	1,8% (m/m)
Total potassium content, calculated as potassium oxide (K_2O)	3,3% (m/m)
Content of water-soluble potassium, calculated as potassium oxide (K_2O)	3,3% (m/m)
Total calcium content, calculated as calcium oxide (CaO)	0,17% (m/m)
Total iron (Fe) content from sulphate	0,65% (m/m)
Zinc (Zn) content from sulfate	0,56% (m/m)
Organic carbon content (Corg)	36,1% (m/m)
Dry matter content	55,4%

Fertilizer characteristics:

O-80

Organic and mineral universal liquid fertilizer of a new generation, environmentally friendly, harmless to bees in a concentrated natural form of an amino acid complex with the addition of humic and fulvic acids macro and microelements for foliar and soil application.

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Data wydania: 25.01.2023r.

Dosage of fertilizer O-80 concentrate

Deadline/Development Phase
Corn 1. Seeds: 1l in 10l of water per 1t of seeds, soak 40 - 60 minutes, dry and sow within 3 days. 2. 2-3 leaves: dilute 1-1.5 l in 250 liters of water per 1 ha. 3. 5-6 leaves: 1-1.5 l dilute in 250 liters of water per 1 ha. 4. 8-10 leaves: dilute 1-2 liters with 300 liters of water per 1 ha.
Cereals 1. Seeds: 1l O-80 in 10l water per 1t of seeds, soak 40 - 60 minutes, dry and sow within 3 days 2. Beginning of tillering (3-4 leaves) 3. Beginning of tube formation 4. Thickening of the sheath flag leaf 5. Heading. Phase 2-5: dilute 1 liter with 250 liters of water per hectare.
Rapeseed 1. Seeds: 1l in 10l of water per 1t of seeds, soak 40 - 60 minutes, dry and sow within 3 days. 2. Seedling. 3. Leaf outlet formation phase. 4. Stem formation phase 5. Budding phase. Phase 2-5: dilute 1 liter with 250 liters of water per hectare**.**
Sunflower 1. Seeds: 1l in 10l of water per 1t of seeds, soak 40 - 60 minutes, dry and sow within 3 days. 2. Seedling 3. Leaflet formation phase 4. Stem formation phase. Phase 2-4: dilute 1 l with 250 l of water per 1 ha. 5. Budding phase: dilute 2 l with 250 l of water per 1 ha.
Beetroot 1. Seeds 1l in 10l of water per 1t of seeds, soak 40 - 60 minutes, dry and sow within 3 days. 2. 4-8 leaves: dilute 1 l in 250 liters of water per 1 ha 3. 10-12 leaves: dilute 1 l-2 l in 250 liters of water per 1 ha 3. Row closing phase: dilute 2 l in 250 liters of water per 1 ha.
Potatoes 1. Treatment of tubers before planting: 1.5 l per 15-20 liters of water per 1t. 2. Stem growth phase: dilute 1 liter with 250 liters of water per hectare. 3. Phase of closing plants in rows: 1l-2l diluted with 250l of water per 1 ha. 4. Butanization phase: dilute 2 l to 250 l of water per 1 ha.
Tomatoes 1. Three days after planting in the soil: dilute 0.5 l in 200 l of water per 1 ha. 2. 2 weeks after the first application: dilute 1 liter with 200 liters of water per hectare. 3. Flowering period: dilute 1.5 l in 200 l of water per 1 ha. 4. During the fruiting period: dilute 1 l in 200 l of water per 1 ha.
Cabbage 1. Seeds: 1l in 10l of water per 1t of seeds, soak 40 - 60 minutes, dry and sow within 3 days. 2. Seedlings: 0.2L in 15L of water, soak the roots for 6 hours, plant within 3 days. 3. Spraying 1 after 10-15 days after planting the seedlings into the ground: 1l diluted with 250l of water per 1 ha. 4. Spray 2 in 15 days after the first spray. 5. Spray 3 in 20 days after the second spray. 6 Spray 4 in 15 -20 days after the third spray. Phase 4-6: dilute 1.5 liters in 250 liters of water per hectare.
Legumes 1. Seeds: 1l in 10l water per 1t of seeds, soak 40 - 60 minutes, dry and sow within 3 days. 2. Phase of 3 tripartite leaves. 3 Beginner phase. Phase 2-3: dilute 1 liter with 250 liters of water per hectare.
Strawberries 1. Preparation of seedlings: 100ml per 10l of water. Soak the seedlings for 3 hours before planting. 2. Growth and vegetation phase before flowering. 3. Post-flowering phase. 4. Growth and maturation phase. Phase 2-4: dilute 1 liter with 250 liters of water per hectare. 5. Breeding phase: dilute 1.5 l in 250 l of water per 1 ha.
Cucumber Seeds: 10 ml per 1 liter of water. Soak 40-60 minutes. Plant within 3 days. 2. Phase two first leaves. 3. The flowering phase. 4. Phase of the first half of fruiting. 5. Phase of the second half of fruiting. Phase 2-5: 1l diluted with 250l of water per 1 ha.

Product classification according to the Regulation of the European Parliament and of the Council (EC)

No. 1272/2008 of 16th of December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC and amending Regulation (EC) No. 1907/2006 (Journal EU Office No. 1.353 of December 31, 2008) - **mixture not classified as hazardous.**

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Analytical methods:

Lp.	Tested feature	Research/measurement method	reference document
1.	Total potassium content, calculated as potassium oxide (K2O)	by weight	PN-EN 15477:2009
2.	Content of water-soluble potassium, calculated as potassium oxide (K2O)	by weight	PN-EN 13040:2009
3.	The content of organic substances in dry matter Organic carbon content in dry matter	by weight from calculations	PN-EN 13039:2011
4.	Total calcium content, calculated as calcium oxide (CaO)	Titration	PN-EN 16196:2013
7.	Total iron content (Fe)	Flame Atomic Absorption Spectrometry (FAAS)	Research procedure

Analytical methods in accordance with current legal regulations.

IV. Transport:

It can be transported by any means of transport, provided that the product is protected against movement and weather conditions. The fertilizer is not subject to ADR regulations. The means of transport should be dry and tight. Protruding parts (e.g. hooks, nails) should be secured so as not to damage the packaging.

Fertilizer O-80 can be packed in containers with a capacity of:

1litre, 5 litre, 10 litre, 1000 litre.

V. Packaging and label

The information contained on the label is in accordance with REGULATION (EU) 2019/1009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 5th of June 2019 laying down rules regarding the making available on the market of EU fertilizing products, amending Regulations (EC) No. 1069/2009 and (EC) No. 1107 /2009 and repealing Regulation (EC) No 2003/2003.

Information should be included on the label:

- marking: CE **fertilizer**
- fertilizer type: **PFC 1(B)(II): LIQUID ORGANIC-MINERAL FERTILIZER**
- the chemical symbols of the declared primary and secondary nutrients and the numbers indicating their content
- providing the amount of nutrients (name, form, size)
- a list of ingredients used in the production of the fertilizer in accordance with the regulation (UE) 2019/1009

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- net weight
- name and address of the manufacturer
- information on transport and storage conditions
- information on the dosage and dates of application of fertilizers
- description and purpose
- advanced additional fertilizer properties
- the trade name of the product must be placed on the packaged fertilizer label - in accordance with the Act of 7th of May 2009 on packaged goods
- labeling elements/or warning measures

VI. Storage

The fertilizer should be stored in a dry and sunny place, in factory packaging, under a shelter or in a warehouse. Keep out of the reach of children, pets and farm animals, away from water and food sources. The product should be stored in a dry and ventilated place out of direct sunlight. Partially used or damaged containers should be properly closed to prevent spillage. Store between 5°C and 30°C

VII. Shelf life and warranty

Fertilizer usefulness within 2 years from the date of production, subject to compliance with the rules of storage and transport given in the technical specification and on the label. Under the conditions described, the product does not lose its fertilizing properties.

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