

Compost from green waste and digested mixed-waste by "ACEA Pinerolese" process

Keywords: soil improver • carbon rich • hygienised • stabilised • slow-acting fertiliser

Key facts:

- **Focusing geographical areas:** EU28
- **Product category:** Soil improver. Within the fertiliser regulation all CE marked fertilising products must comply with a certain Product Function Category (PFC). Florawiva is a PFC 3 A 'Organic Soil Improver'. Furthermore it is eligible to be categorised as Component Material Category (CMC) 3 'Compost'
- **Product status:** available on the market (TRL=9)
- **Input material:** de-hydrated effluent from the anaerobic digestion of organic fraction of municipal solid waste, green residue from separate urban collection and dehydrated effluent from the wastewater treatment plant.
- **General appearance:** Florawiva is a soil improver with a loose structure. The composting process contributes to achieving a soil-like texture with a brown to dark colour.
- **Nutrient content N-P-K:** 2,4% N (DM), 2,3% P₂O₅ (DM), 1,3% K (DM)
- **Permit availability:** ACEA is registered to "Registro Fabbricanti" n° 00218/07 for the fertilizer market, and it is authorized to sell 5 conventional products ("Registro uso convenzionale") and one biological product ("Registro uso biologico"), according to the national legislation (D.Lgs. 75/2010)



Summary:

Florawiva is the stable, hygienic and humus-rich end-product of the composting of pre-digested selectively retrieved organic waste streams. It is a secondary raw material containing the stable organic material, called humus, and the inorganic mineral fraction (i.e. of the waste the composting process started with). The high temperature achieved during the process implies that compost is free of pathogens, insect larvae and weed seeds. This ensures that the use of pesticides and herbicides on compost-enriched soil will be limited compared to not treated soil improvers applications. The amount of humus also increases and the cation exchange capacity of the material improves. The formation of humic acids from microbial degradation also provides suitable properties for use of compost as a soil improver. Florawiva could be used as a soil improver in horticulture and agriculture, resupplying a soil that is exhausted in organic matter and nutrients. Therefore, besides certain levels of nitrogen, phosphorus, potassium, calcium and magnesium, compost contains a lot of organic matter. The nutrients of compost are structured in an organic matrix and are slowly released. Florawiva is a multi-nutrient soil improver with a slow fertilisation effect. This helps to prevent the leaching of nutrients through sudden abundance.



How to use:

- **Type of farming:** organic, low input, conventional
- **Cultivation methods:** open field, greenhouse
- **Recommended crops:** potato, wheat, cabbage, pumpkin, cucumber, tomato, leafy vegetables, celery, leek and other crops in agriculture – also use in horticulture, floriculture and arboriculture
- **Application doses:** 10-30 t/ha (according to soil quality, season, crop uptake,...)

Key product features:

- High organic carbon content: 31,1% (of dry matter by weight)
- Multi-nutrient (N- P₂O₅-K₂O-CaO-MgO)
- Nutrient content %: N (2,4%), P₂O₅ (2,3%), K₂O (1,3%).
- DM: 24%
- pH: 8,3
- Conform strict requirement (Dlgs. 75/2010 (IT); Fertiliser (EU)) as to organic and inorganic/physical contaminants
- Free of pathogens, insect larvae and weed seeds

Key product benefits:

- Produced from pre-digested selectively retrieved organic waste streams
- Closing material and nutrient cycle: secure source of carbon, nitrogen, phosphor, and other macro-/micro-elements
- Improves soil biodiversity by increasing microbiological fauna & flora
- Increases soil fertility
- Slow release of nutrients
- Increases cation exchange capacity of soil
- Reduces leaching
- Increases water retention capacity and thereby decrease vulnerability to erosion and desiccation (droughts)
- The anaerobic digestion process allows producing biomethane.

Competitive position and advantages:

Florawiva is a multi-nutrient and a high carbon soil improver. The compost supports soil fertility and releases its nutrients slowly, reducing risks of leaching of mineral fertilizers. It is a stabilized product implying that, once applied, no temporary decrease of N-levels occur. Acea Pinerolese's compost is sold around 10-20€/t depending on required volume and packaging).

Contact

Name: Viviana Negro

Company: ACEA Pinerolese Industriale S.p.A.

Web:
www.ambiente.aceapinerolese.it

e-mail:
viviana.negro@aceapinerolese.it

