# **COMPOSTING PLANT** FOR THE PRODUCTION OF COMPOST IN CATANIA

The proposed plant layout has the main objective to develop the production of compost, obtained through a biological treatment of the organic fraction of the waste coming from the separate collection.
The plant, authorized with D.D.S. n. 120 of 12/02/2014 and subsequent D.D.G. n. 1212 dated 05/09/2016, has a maximum capacity of 70.000 t / year has been defined for waste R13 and R3 as indicated in Annex C of the fourth part of Legislative Decree No. 152/2006.
The different activities that take place inside can be defined as follows:

- provision and mechanical pre-treatment of waste;
- accelerated bio-oxidation in aerated static heaps;
- ripening in upturned and aerated heaps.

The duration of the biological process must not be less than 90 days and in the first phase includes a accelerated bio-oxidation, followed by a second phase of maturation in heaps.
The process technology for accelerated bioxidation is a static type with forced aeration of the material and takes place within n. 10 biocells in reinforced concrete ensures a rapid opening / closing of doors.
The maturation phase takes place inside a shed where 10 heaps are placed which are periodically turned by means of a revolving means.
Finally the material is screened for a final refining: the overage is used as a structuring and the under-size materials are placed in static heaps until the days necessary for stabilization are reached.
The quantity of product is about 21.000 t / year and is stored under a side-opened steel structure with a perimeter wall of 3,00 m height. The plant has been classified by a series of systems for the mitigation of emissions in the various environmental sectors that the activity in question could generate.

## DESIGN DATA

**Private client** Sicula Compost
**Type of service** Executive planning
**Project cost** € 14.726.000,00
**Location** C.da Grotte S. Giorgio (CA)
**Lot area** 27.000 m$^2$
**Design period** August 2017 - March 2018
**Entered into operation** May 2018

## TECHNICAL DATA

**Operations pursuant to all. B and C in Part IV of Legislative Decree 152/06 and subsequent amendments** R3, R13
**Type** composting process in biotunnel in reinforced concrete and final maturation through aerated (STAGE 1) and static dynamic piles (PHASE 2).
**No. 1 building for composting tunnels** dimension 65 x 55 m
**No. 1 building for the conferment and treatment of waste** dimension of 100 x 35 m
**No. 10 composting tunnel (ACT PHASE)** dimension 12.50 x 21.60 m each
**No. 10 aerated and turned up piles** dimension 4 x 2.7 x 40 m each
**Average process duration** 90 days