

A lightweight glass foaming agent with innumerable cavities working as a tree planting base, water purifier, and drainage accelerant to prevent global warming and water quality maintenance.

## Features

- ▶ A lightweight product with excellent water penetration and retention performance used as a tree planting base and drainage accelerant.
- ▶ Incorporates innumerable cavities where colonies of bacteria can exist, thus providing water purification and deodorization effects.
- ▶ Stepping on the surface causes a crunching sound at a level of 70 dB, thus making it possible to use the product as a crime preventing gravel material for gardens.

## Overview

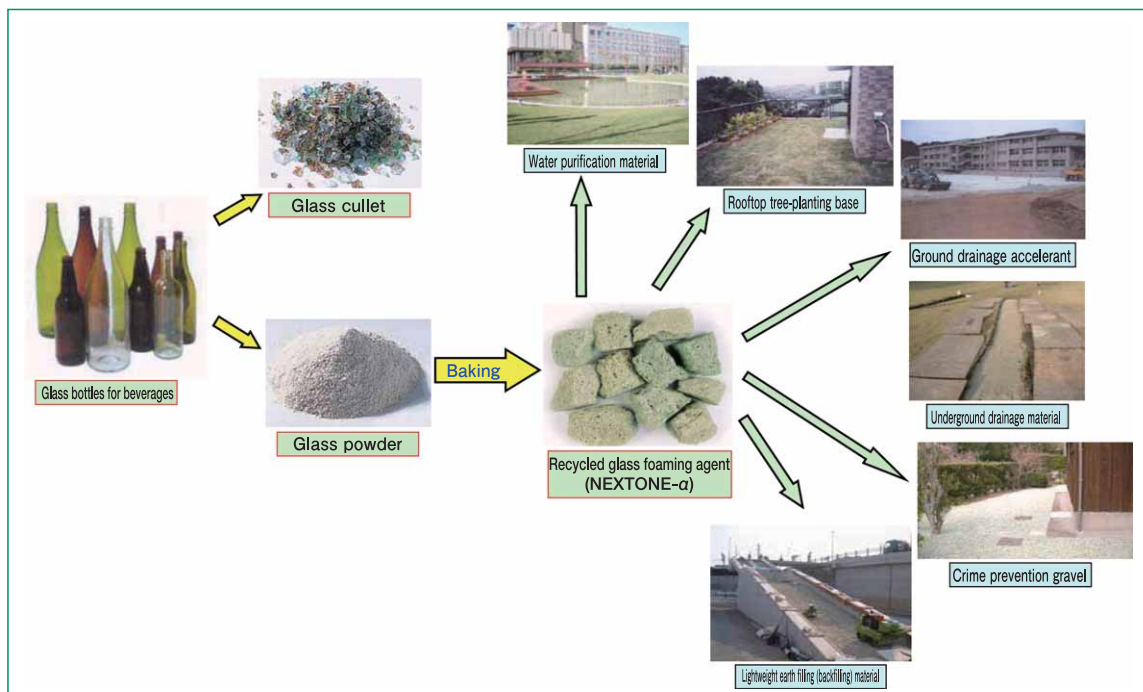
(Technical principles, actions, etc.)

The glass foaming agent NEXTONE-α is recycled from used glass bottles discharged from general households. These glass bottles are crushed into impalpable powder. The powder is mixed with a forming agent, baked, and cooled down to manufacture NEXTONE-α.

NEXTONE-α is a block in indeterminate form, the maximum size of which is 75 mm or less, and the block has minute pores covered with hard vitreous walls. Like a pumice stone, there are innumerable cavities on the surface of NEXTONE-α. NEXTONE-α is lightweight and easy to handle. NEXTONE-α has the following basic performance characteristics.

- ① A porous lightweight product, the density of which can be minimized when compacted.
- ② Excellent water penetration, absorption, and retention performance.
- ③ High shear strength.
- ④ A safe product free of toxic substances that may cause environmental pollution.

Therefore, the product can be applied as a construction material to form a lightweight foundation and tree-planting (rooftop) base or a drainage accelerant or underground drainage material for stadiums and recreation facilities. Besides, the product adsorbs and breaks down phosphorus and ammonia. Therefore, the product can be used as a water purification material or a filtration material for fish preserves and fish farms.



NEXTONE-α application examples

## Effects

- NEXTONE-α was applied as a drainage accelerant to the ground of a junior high school in Shimonoseki, the track records of which show that NEXTONE-α has very good drainage performance, thus suppressing the formation of puddles or mud after raining.
- The water examination results of NEXTONE-α blocks used as water purification materials verified that the water was purified at a chemical oxygen demand (COD) rate of 60%, total nitrogen rate of 90%, total phosphorus rate of 85%. The effect of the blocks has not been changed since it was applied one year ago.
- Stepping on the surface causes a crunching sound at a level of 70 dB, thus making it possible to use the product as a crime preventing gravel material for gardens.
- The specific gravity of the recycled glass foaming material can be adjusted between approximately 0.5 and 1.2 if NEXTONE-α blocks are used as lightweight earth filling (backfilling) materials.

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