

QuikSoil®2300 Odour Control in Bio solids Composting

QuikSoil® 2300 is an effective odour management tool for sewage bio solids destined for composting or drying operations, especially when ammonia and amines comprise a significant percentage of the odour volume.

QuikSoil® 2300 is valuable in these operations for several reasons:

- First; a single application of QuikSoil® 2300 provides 65% to 85% reduction in odour in 1 to 5 hours - a reduction that is permanent.
- Second, complex carbohydrates added to the product help stimulate bacterial activity. This leads to faster biological temperature increases and greater demand for nitrogen to build new cells, decreasing the amount of valuable N wasted as off-gassed ammonia, and gradually decreasing volume levels of bio-solids. (Volume decrease is typically 25% over 4 to 6 weeks.)
- Third, an increase in organic acids decreases pH, also reducing ammonia discharge.
- Fourth, total VOC emissions are decreased. Maintaining VOC's in the feedstock until they are biologically digested results in higher organic content in the finished product and decreased carbon emissions.
- Fifth, increased temperatures result in more water loss as steam during turning, resulting in faster drying with less labour.

Feedstocks treated with QuikSoil® 2300 achieve greater stability in less time and also contain higher humic acid levels than materials processed conventionally. Typically, application will occur as solids exit the belt press or centrifuge, or as they are conveyed or loaded into trucks. In situations where bio-solids must be trucked through habited areas or where odour at the off-loading site is a problem, 2300 can provide meaningful reductions in odour with a single application prior to exiting the wastewater facility.

QuikSoil® 2300 is a blend of enzymes, co-enzymes (minerals and vitamins), organic acids, and surfactants. It contains no perfumes, essential oils, or alcohols. 2300 requires no special handling other than avoidance of freezing. 2300 is totally bio-degradable and completely environmentally friendly. Spills may be washed away with water, and accidental discharge into local waterways is not harmful to wildlife and will not impact BOD or COD levels in the water.

Protocol for Composting Operations

Application.

QuikSoil® 2300 is mixed with water in any quantity desired. (Water acts only as the carrier.) **2300** should be added when the feedstocks are mixed, or – the case of bio-solids – when the sludge leaves the press or is loaded into a truck or container. The **2300** should be as thoroughly mixed into the material as is possible. A minimum of 100 millilitres of **2300** concentrate are required per wet ton of material treated.

Protocol for Drying Operations

Application.

QuikSoil® 2300 is added with sufficient water to facilitate mixing. The dose rate of **2300** concentrate should be a minimum of 100 millilitres per wet ton of feedstock. (A maximum of up to 300 millilitres of concentrate may be utilized when economic or other factors justify increased results.) The **2300** should be mixed into the feedstock as thoroughly as possible.

Operations.

After mixing and row formation, the mass should be allowed to achieve sufficient temperatures for pathogen reduction. This may require turning. After this, turning is only implemented each time the temperature climbs above 60° C. Turning is implemented with the temperature rising rather than declining to maximize moisture loss as steam and to maintain preferable temperature conditions for nitrifying bacteria (a maximum of 60° C). Processing time is determined by final moisture level desired and available processing space.

QuikSoil® 2300 is environmentally friendly, and requires no special care in handling. It is user friendly, completely water soluble and totally biodegradable (see attached health and safety data sheets). The product has a 3 year shelf life when stored in dry conditions and not exposed to freezing.