

## Process - Overview

The Sterecycle process is 2 stage "sterilisation at temperature and pressure followed by mechanical separation.

The heart of the Sterecycle® system is a series of interconnected Sterecycle® autoclaves. These are pressure vessels similar to those used in hospitals to sterilise surgical instruments but are much larger and have unique patented characteristics. Unsorted household bagged waste is loaded directly into the vessels and heat is applied at around 130 degrees C. A combination of the steam and pressure raised internally and the rotation of the vessels results in:(i) the organic fraction of the waste being broken down into a fibrous lignocellulosic biomass;(ii) the non-organics being sterilised and steam cleaned;(iii) the organics can now be easily separated from the non-organics; and (iv) reduction in volume of the input waste material by 60/70 %

Other solutions such as "Mechanical-Bio-Treatment" typically start by shredding or ball-milling the waste, which leaves a very high percentage of contaminants, in particular plastics and heavy metals (such as lead from batteries). As a result the material produced ("refuse derived fuel") is low quality and can only be landfilled or sent to cement kilns at further cost. In contrast, the Sterecycle® process is far more gentle and produces a high quality clean Biomass fibre and recycles the non-organics in particular the plastics. Another alternative technology, gasification or "Advanced Thermal Treatment", is similar to incineration in that it simply destroys the entire waste stream and recycles nothing, whilst claims of greater energy efficiency are disputed.