

## Renderplas Contributing to Sustainability in the External Envelope

A well-known and commonly used component of external wall coverings has wrongly remained unloved by the architect for almost 20 years since its introduction to the UK market in 1990. Whilst it is widely accepted that external wall insulation (EWI) systems and external render can dramatically improve the U-values of a building, the materials that are used in these systems may not be so popular.



According to figures from DEFRA going back to 1976 the process of the construction of buildings produces over 70M tonnes of CO<sub>2</sub> a year in the UK alone. Furthermore, in our household-use of energy, we produce over 140M tonnes of CO<sub>2</sub> every year.

Renderplas has been at the forefront of the design and manufacture of PVCu render beads since 1990 and we are now leading the way in creating wall covering components in sustainable and environmentally sensitive ways. The case for Renderplas over stainless steel is clearly made.

To produce 1 tonne of the type of stainless steel that is commercially available today, 3.6 tonnes of CO<sub>2</sub> is generated (according to a study by Yale University) and this steel already comprises of 67% recycled material. To produce a tonne of virgin PVCu generates just 1.9 tonnes of CO<sub>2</sub> using the most common means of production (suspension polymerisation) but the most startling fact relates to the method of manufacture by Renderplas.

The PVCu beads supplied worldwide by Renderplas in 2008 comprised of an amazing 96% recycled material. This means that when Renderplas produce 1 tonne of render beads it generates a fraction of the CO<sub>2</sub> produced by manufacturers that use virgin PVCu or producers of metal beads.

Whilst sustainability is undoubtedly important, quality, performance and price must be taken into account when choosing appropriate components of energy saving insulation as well. None of these aspects of wall covering materials should be compromised just to satisfy a headlong rush to conform to the new green agenda.

This may be why some are still under the misapprehension that Stainless Steel is the only choice for some applications of render beads and movement joints. For years, PVCu was not able to compete with the strength of many steel beads. This all changed however when Renderplas engineered the new PowerBead. Ultra strong, ultra light and outperforming stainless steel beads in every way PowerBead follows a protected design that means it can be made from the same recycled materials as its sister products in the Renderplas range.

Unfortunately stainless steel beads have become costly to make in comparison and even the highest grade of material will corrode, especially near the coast, leaving unsightly stains requiring expensive maintenance. So there is a natural alternative to specifying stainless steel beads that gives fantastic performance for the lifetime of the system whilst meeting green obligations: Just specify a Renderplas bead.

*References: DEFRA - Environment Statistics and Indicators Division, The energy benefit of stainless steel recycling - Jeremiah Johnsona, B.K. Reckb, T. Wangb, T.E. Graedel - Program in Environmental Engineering, Center for Industrial Ecology, School of Forestry and Environmental Studies , Yale University, New Haven, CT, USA*