Zelam offers new science to the wood protection industry

The company is research driven and strives to differentiate itself from the marketing approach of international competitors.

The recent completion of its state-of-the-art continuous micro-encapsulation plant, one of only a handful worldwide, provides the platform for a quantum leap forward in chemical delivery systems.

Zelam intends to introduce a range of products based on its newly developed ENCAPSTM technology, a system by which the active ingredient of a formulation is encapsulated in a specially formulated polymeric wall, forming a discrete microcapsule. In this microcapsule, the internal phase containing the active ingredient is protected from the external phase by the inert physical barrier of the polymeric microcapsule wall. The wall provides protection for the active ingredient from the environment and vice versa.

Controlling the size of the microcapsule and the type of polymer in the capsule wall allows for the preparation of microcapsules with a range of properties. These properties can be used to control the availability of the active ingredient and the way in which its release is triggered. One important benefit of the ENCAPSTM process is that it can be used to minimise worker health and safety issues by preventing direct contact with the active ingredients.

Where a biocide is added to glue during the manufacture of veneer products such as plywood and LVL, the active ingredients must withstand the very high pH of the resins and the extreme heat and pressure of the pressing process. The ENCAPSTM process has the potential to protect the actives while they are in the resin and through the hot pressing.

A dedicated team of Zelam scientists and engineers has spent considerable time developing the technology. A continuous computer controlled manufacturing facility has been built using in-house technology capable of meeting future production demands. Ongoing product development may also be undertaken in the original ENCAPSTM pilot plant.

Using the computer-controlled continuous ENCAPSTM plant, microcapsules from submicron sizes upwards, or a range of sizes, can be consistently manufactured. The wall thickness of the capsule, capsule make-up and nature of the capsule contents can also be controlled during the manufacturing process. Each product has a unique end use so it is essential to develop and manufacture the correct capsule for each situation.

Zelam has patent applications covering much of this technology and, as a proud Kiwi ‘can-do’ company, is determined to ‘lift the bar’ to offer some real alternatives to the current technologies employed in the wood protection industry.

For further information please contact:
Andre Siraa  Tel: 06 755 9234  Email: asiraa@zelam.com  www.zelam.com

Zelam (formerly Taranaki NuChem) is a proudly 100% New Zealand owned company strongly committed to the development of new products and technologies that offer real advancements to the wood protection industry.