



New wood protector reduces environmental impacts

With funding from the Danish Environmental Protection Agency (Danish EPA) under the Ministry of Environment, and together with the Danish Technological Institute, the paint manufacturer, Dyrup A/S, has developed and completely new type of sustainable and environmentally friendly wood protector which is just as good as the old oil-based products.

Wood protectors are traditionally not one of the most environmentally friendly products. Previously they have been based on fossil oil, solvents and a large number of different chemical compounds. Therefore it has been important to find new and more sustainable varieties.

Dyrup decided to take up the challenge. Dyrup has developed a water-based wood protector, based on structured silicon which is found in rocks and sand. The finished product is called GORI Nature, and the new solution is not just a product without oil-based constituents, it also has fewer additives and lower amounts of solvents.

During the project, new knowledge was acquired on the use of silicon components, and this has been applied innovatively in GORI Nature to give the wood protector a smudge-repellent property and long durability. The product has now been tested and the results show that GORI Nature protects wood and is just as durable as the best fossil-oil-based products. GORI Nature also meets the requirements to qualify for the official ecolabels, the EU Flower and the Nordic Swan, so it is a good choice for the environment.

Fact box

The project is part of efforts by the Danish EPA under the Ministry of Environment to promote eco-efficient technology. Development of GORI Nature was in close collaboration between Dyrup A/S and the Danish Technological Institute, with support from the Danish EPA.

An entirely new way of working

It was crucial for Dyrup to start the development process from scratch and to approach the project scientifically. With assistance from the Danish Technological Institute, it was possible to test and confirm the new ideas and theories underway. This established the requirements for developing a product based on relatively few components which all meet the condition that they must be environmentally friendly.

For the Danish Technological Institute, the project has perspectives far beyond the paint industry. Work on the stability of emulsions and substitution of constituents is also relevant for other product groups such as cosmetics and food as well as in connection with wastewater treatment and livestock manure separation.

Today GORI Nature is available from paint shops and do-it-yourself warehouses. It is exported to France under the name BONDEX Cote Nature.

Commercially, Dyrup sees great potential in the new product. "For us, this is an investment in the future. We are convinced that consumers will increasingly demand more environmentally friendly wood protectors. We know from experience that home owners are conservative. They want to be sure that it works and that it keeps on working. It took time to get oil and solvents out of ordinary paints, but today everyone knows that water-based paint is just as good as the old types," explained Jannie Essendrop, head of marketing at Dyrup.

The objective without oil-based substances and with as few as possible components. The product was also to be at least as good as existing wood protectors and it was to have commercial potential.

The project was completed in December 2012.