

SEA WOOL

INNOVATING WITH TERRITORY RESOURCES

Through a significant investment in research, the [EDILANA](#) company has developed new uses of sheep wool in different fields related to environmental development, putting together a broad catalogue of products.

Specifically, EDILANA launched in 2014 a highly innovative new product called [EDIMARE, by using pure sheep wool](#)

[and sea wool](#), obtained through an industrial processing of the *Posidonia Oceanica* collected on the beaches of the territory. This new material is used to build health-insulating panels with the highest thermal inertia, if compared to other similar ones.

Sea wool is a fiber suitable for bio-construction as it is similar to the wood-fiber; it is very strong and has more than 30% of thermal conductivity, thus permitting heat and cold retention with very low energy consumption. EDIMARE is a 100% natural product made from sea grass (*Posidonia Oceanica*) and sheep wool. The whole manufacturing process is environmentally friendly and it is a totally natural industrial process by keeping out both chemical and heat treatments which could cause an increase of energy consumption. Waste are recovered producing other useful materials and transportation is also sustainable as they use the already existing means of transport of the territory.

EDILANA succeeded in creating high-level products by using resources of the territory and their potentials. EDIMARE is produced by using waste materials available on the territory and, once the panels' lifecycle is ended, the material can be recycled again.

The sheep wool used comes from overproduction or waste materials whose elimination is usually very expensive due to the fact that sheep should be sheared every year. EDILANA guarantees the farmers a market for their wool production, hence supporting a traditional activity of the territory.

The *Posidonia Oceanica* is a marine plant endemic to the Mediterranean Sea, it creates habitat for many fish and plants and its roots protect the coasts from erosion. However, these plants tend to invade the shores and they should be collected and eliminated as waste. The EDILANA company collaboration was requested by specialized services and local administrations in order to look for a solution to the problem of eliminating the big quantities of *Posidonia Oceanica* accumulated on the coastline, as their decomposition was creating an emergency situation.



The manufacturing process of *Lana di Mare*® is patented and certified for its environmental quality. In December 2014, the EDIMARE panels won the Green Awards on the Triennial International Exhibition in Milan (Italy) and it is gaining great interest both at the national and international levels.

The entrepreneurial project EDILANA, involving entrepreneurs, researchers and farmers from the Sardinia Region (Italy), uses wool from the native sheep as a high-quality insulation to produce building materials for edifices and bio-constructions.

In addition to this, the enterprise created the ORTOLANA line, which takes advantage of the sheep wool to produce [organic products in agriculture](#). The great quantity of fatty acids contained in the sheep wool is maintained intact through an innovative manufacturing process and executes a preventive action for the health of the plants. In this way, the use of herbicides and other chemical synthesis products is avoided. These sheep wool products halve the hydrological resources requirement, protect the soil against erosion and drainage, keep the humidity, maximize the solar catchment for clean energy production in the green houses, and reduce air and soil contamination.

In order to develop a set of products, EDILANA created a production chain composed of 42 enterprises of the regional territory. 30 companies from different Italian areas become associated with EDILANA thus contributing to the development of an ecological cluster of wide dimensions and impact.

With this new heat-insulating panel, this company investing in innovation is fostering a great contribution to the bio-construction materials as well as to the local sustainable development.

To know more

[EDIMARE brochure](#)

[EDILANA products](#)

[ORTOLANA](#)

[Green Awards article](#)

