ECO-S insulated window

M SORA Trading and production
JSCTrg svobode 2
4226 Žiri, SLOVENIA

www.m-sora.si

Ms. Barbara Subic

barbara.subic@m-sora.si

+38645050220

INFORMATION ON THE ECO-INNOVATIVE SOLUTION PROVIDER

This eco-innovative solution is the output of the project titled “ECO-S insulated window” co-funded by the European Commission within the framework of the Competitive and Innovation Program. This solution has been developed by a team coordinated by the Slovenian organization M SORA in partnership with GS Georg Stemeseder (AT).

SHORT DESCRIPTION OF THE ECO-INNOVATIVE SOLUTION

The innovation consists of an insulated window, which uses a wooden wainscot with air holes for its insulation. Windows have the technical and thermal characteristics of similar insulation products (polystyrene, polyethylene foam, polyurethane foam), but the benefits include easy production with low operating costs, recyclability and the use of the raw material wood. There are different types of windows, doors and façade systems available, which are produced using this new technology. The production will be carried out with “normal” wood processing equipment and spruce.

INDUSTRIAL SECTOR – MARKET SEGMENT AND ACTUAL APPLICATIONS IN INDUSTRY

24 Lumber and wood products, except furniture

INDUSTRIAL CLASSIFICATION - NACE CODE;

16 Manufacturing of wood and of products of wood and cork, except furniture; manufacturing of products of straw and plaiting materials

1. DESCRIPTION OF ECO-INNOVATIVE SOLUTION

Technical aspects of the eco-innovative solution

The eco-innovation solution consists of an entirely wooden window frame, achieving good insulation standards with air cavities as an insulation barrier. The window frame is made of wood plastic composite (WPC); it has good thermal characteristics and high resistance and dimensional stability. There are 4 window types available, 2 timber windows and 2 timber/aluminium windows.

The core element of this new technology is the know-how of the production of the wooden frames. Standard wood manufacturing machinery with normal blades, typically available on the market, will be used and no extra-investment is needed. The technology transfer consists in the know-how of the production of these wooden frames with lamellas, how they are glued together and how they are customized in the profiling machines. Spruce is typically used for the wooden frames; in exceptional cases larch will also be used. Final results include window frames, façade elements and doors (transparent building elements) with very low thermal conductivity (U-Value <0.8 W/m²K) so that heat or cooling losses are minimized.

Economic and environmental benefits of the eco-innovative solution

The costs of the solution (manufacturing of the windows) depend mainly on the costs for wood and labour and is around 50% more expensive compared to standard solutions on the market in Slovenia. Return on investment depends on the final user, as the installation of these windows with very good thermal characteristics will significantly decrease the costs for cooling and improve living comfort.

2. AVAILABILITY OF THE ECO-INNOVATIVE SOLUTION AND BUSINESS PARTNERSHIP

Market readiness, Trade mark, existing market coverage, commercialization strategy

ECO-S insulation windows comply with all European legislative norms. The eco-innovative solution is being used on different M SORA window types (Nature E92, Nature E112, Comfort E92, Comfort E112). Windows are sold in Slovenia, Italy, Canada, USA, France, Germany and Austria. The technology is patented and has gained two Passive House Institute (PHI) certificates. Trade mark available: Eco-S

Requirements to adapt the solution to the local market and potential applications/market size

The technology can be easily transferred to the North African market. The only limitation is the presence of termites, meaning the frames have to be treated with anti-termite coatings. There are no specific infrastructure requirements needed; state of the art industrial manufacturing technology needs to be available (wood manufacturing). Spruce is used a raw material in Central Europe but any kind of local wood can be processed.

On site-after-sales services support and the technical assistance requirements

Service support will be provided by the technology owner

Targeted local business partners

Local window manufacturer or re-sellers

Type of local business partnership sought

Joint venture, licensing, distribution & sales agreements

SwitchMed Programme is implemented by the United Nations Industrial Development Organization (UNIDO), UNEP Division of Technology, Industry and Economics (DTIE), UNEP Mediterranean Action Plan (MAP and the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC).

SwitchMed Programme is funded by the European Union

Regional Activity Centre for Sustainable Consumption and Production