ABET LAMINATI

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Printed by: L'Artistica Savigliano 11/2007

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ABET LAMINATI. NATURAL HABITAT.

ENVIRONMENTAL POLICY

ABET LAMINATI, manufacturer of Print HPL and Tefor plastic laminates, has always known how to integrate quality and production requirements. Since it first commenced industrial production, the company has always felt a commitment to operate in full respect of the environment, considered essential for the quality of life of present and future generations.

The most daunting, yet at the same time the most stimulating challenge has been the sustainable and realistic combination of environmental protection with production requirements.

Great sensitivity and care are shown for both the internal environment, to safeguard the health of employees, and the external environment, where the utmost attention is given to air, water, earth, energy saving, waste disposal and the responsible use of raw materials so as to create an environmentally friendly manufacturing process.

All this has brought about the development of a true corporate ethic, which over time has become an enshrined cornerstone of the company's strategies, evidence of its great commitment towards all aspects of environmental and safety issues, monitored and managed by an internal system.

Substantial investments have been made not only to comply with legal obligations but also to be in line with the firm philosophical belief of the need to safeguard the environment and reduce energy consumption.

A sustainable realistic synergy of protection of the enviroment with manufacturing needs.

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THE PRODUCTS

ABET laminate falls within the Print HPL category, and is manufactured according to high pressure technology complying with European standard EN 438 and international standard ISO 4568. Print HPL decorative laminates are panels made up of cellulose fibres (paper), impregnated with thermosetting resins in a high-pressure process. The process, defined as a specific combined application of heat and high pressure, produces fluidization, with the consequent polymerization of the thermosetting resins resulting in an extremely compact and homogeneous material.

Print HPL decorative laminates are polymerized and are therefore chemically inert.

Print HPL is approved for contact with food.

For decades laminates have been the preferred product in applications where cleanliness and hygiene are essential requirements.

Print HPL is an extremely compact and homogeneus material.

USE OF ENVIRONMENTALLY FRIENDLY RAW MATERIALS

All the papers used in the manufacture of Print HPL laminate are obtained from raw materials (cellulose) sourced from sustainable forests. Our paper suppliers comply with the regulations of the **FSC** (Forest Stewardship Council) **Chain of Custody**, the mark that certifies products from forests managed in a correct and responsible manner, according to strict environmental, social and economic standards, together with other International Certification Systems on Forest Management.

All these bodies aim to guarantee independent evaluation criteria according to strict environmental, social and economic principles, besides supporting sustainable forest management the world over, in the firm belief that the rational and monitored use of wood will not impoverish forests, but will favour their conservation in terms of recycling and replacement.

ABET LAMINATI chose to make the transition from alcohol-based phenolic resins (e.g. methyl) to water-based resins many years before environmental regulations came into force. This is certainly a less cost-effective option, but considered fundamental to improving environmental conditions, both inside production facilities as well as for external emissions.
Through careful management of the manufacturing process, ABET LAMINATI utilizes only raw materials which are free from halogens, methanol, pentachlorophenol, heavy metals and asbestos fibres.

In order to increase safety levels in the production of phenolic resins, the company chose to work with reduced capacities and decidedly lower temperatures than the process standards, notwithstanding the consequent reduced plant productivity. The risk of the occurrence of events that could damage the surrounding environment have been reduced to virtually zero.

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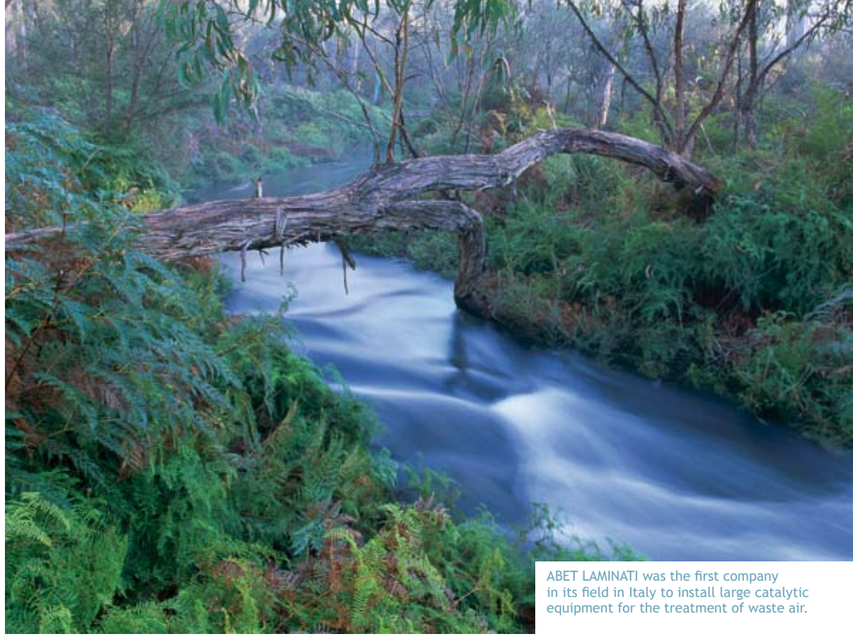
AIR QUALITY PROTECTION

The quality of air emitted into the atmosphere is constantly monitored and rigorously tested according to the various regulations in force.
ABET LAMINATI was the first Italian company in its field to install large catalytic combustion facilities for air treatment. These state of the art facilities maximize the breakdown of any pollutants in exhausts, with the lowest energy consuming technologies available at the time of investment.

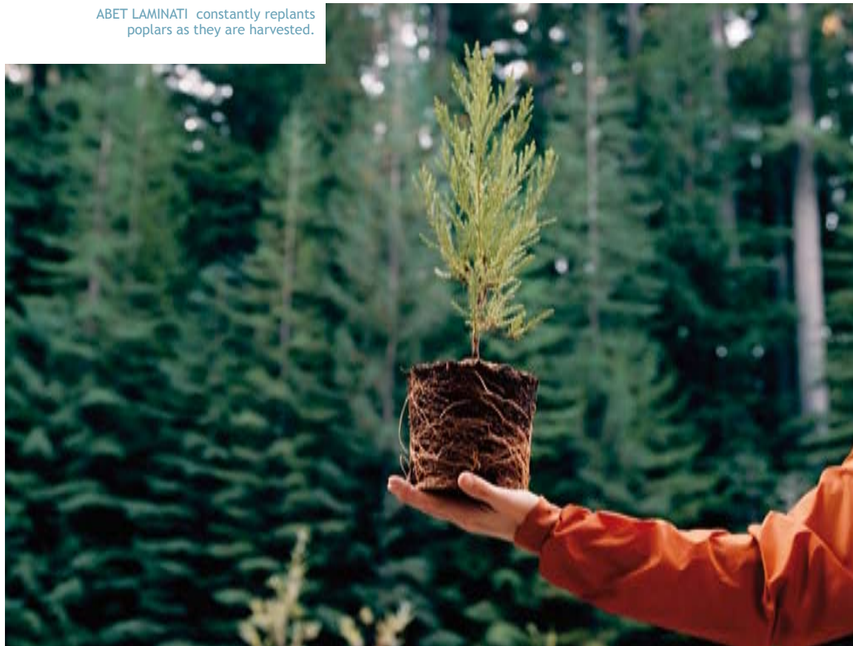
The company is also bound by the parameters defined in the Kyoto Protocol, the international environment treaty signed in the Japanese city in 1997 on the occasion of the COP3 Conference. Adherence to this document requires a serious commitment to work towards a significant reduction of pollutants in emissions.

ABET LAMINATI has achieved CO_2 emissions that are significantly lower those very stringent quotas.
Also along these lines approximately 20,000 poplars have been planted, and are regularly replaced when felled for marketing. The poplar possesses high ecological properties and its small leaves mean that it efficiently purifies the air from carbon dioxide.



ABET LAMINATI was the first company in its field in Italy to install large catalytic equipment for the treatment of waste air.

ABET LAMINATI constantly replants poplars as they are harvested.



NOISE POLLUTION

In this area too, the company has carried out major modifications to all plant that by its nature creates a certain level of acoustic pressure; this source of pollution has been greatly reduced by the creation of sound-absorption systems and chambers at all sources of noise, so that those working inside the plant and those who live close to the production site are not disturbed by ABET LAMINATI's operations.

REDUCING WATER CONSUMPTION

Due to man's effect on the environment, over the last 50 years fresh water ecosystems have undergone profound changes, unfortunately disturbing age-old equilibriums. In order to economize on the use of this essential asset, the plant has been equipped with closed cycle cooling towers that allow for a reduction in consumption estimated at around 90%.
The process waters are completely re-used in the production cycle thanks to a closed cycle without discharges.

PROCESS WASTE AND ENERGY SAVING

As far as process refuse and waste is concerned, the company has continued along the path embarked upon as far back as1964. This consists in the re-use of as much waste as possible through thermovalorization, which extracts energy as vapour making it available for the operation of plant, thus avoiding non-renewable energy consumption.
Considering their high calorific value (18 - 20 MJ/kg), Print HPL trimmings enable optimum energy recovery with in a sophisticated thermovalorization process that serves a dual purpose: an evident reduction in non-renewable energy consumption and the elimination of adding manufacturing waste to public waste disposal sites. Special ecological islands have been set up within the facility that allow for attentive waste separation, aimed at its recovery and re-use, with everything being recorded and controlled according to the most stringent environmental regulations.
Always with the intention of minimizing the impact on the environment, the following measures have been in force for many years:

PACKAGING

All packaging used is the result of research that has led to the use of recyclable, re-usable and reconditioned packaging.
A specific product named ECOPACK was developed by company technicians for the protection of semifinished products within the factory.
This has allowed the re-use of large quantities of waste kraft and of recycled paper at the end of their cycle, which would otherwise would have been destroyed.

TRANSPORTATION

ABET LAMINATI has for years preferred the use of intermodal transport such as land/train, land/ship, which has decidedly less impact than traditional transport on rubber tyres.

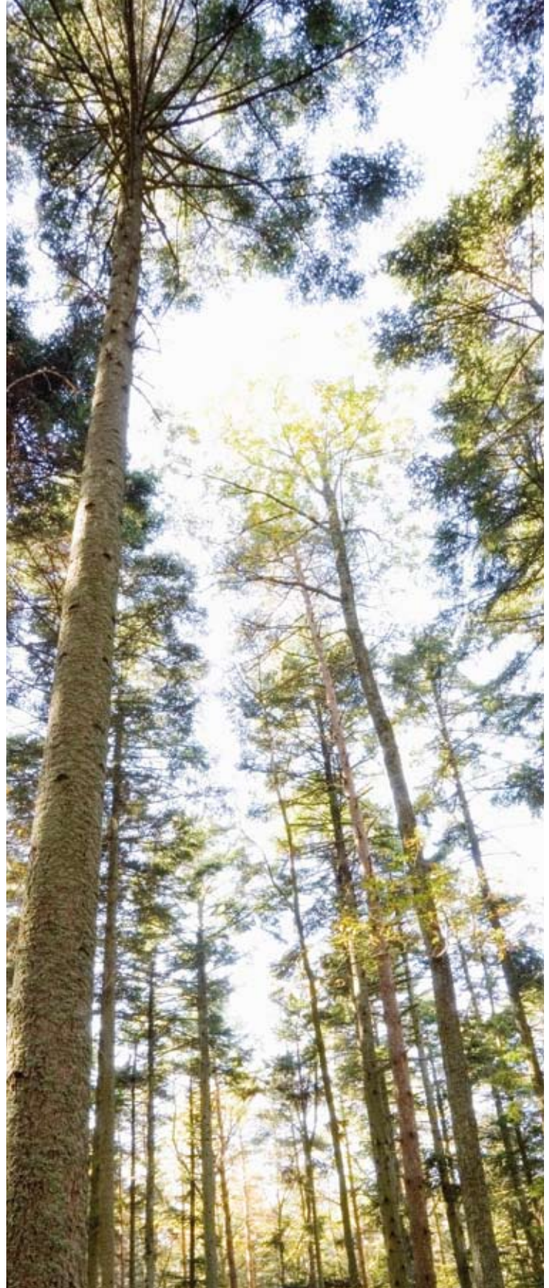
TEFOR®

In the area of recyclability, the company has embarked on an innovative path, endorsing the concept of a cycle in the research/production/consumption system. An innovative idea for us, children of the industrial age, but akin to the traditional farming culture that knew no waste as everything was recycled within a closed-loop system.

Invented and patented by ABET LAMINATI, Tefor® is the first totally recyclable laminate. It is created from the collection and re-use of production waste and is an integral part of this process.

Tefor® is manufactured using laminate powder that has been previously ground and mixed with recycled polypropylene.

The ecological value is therefore twofold, in that, besides recovering production waste, it allows for the creation of a material that, at the end of its life cycle, can be recycled countless times. Thanks to these properties this material is used extensively in the automotive and transportation sectors in general, where particular attention is given to the recovery aspect.



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ECOPACK was developed by the company's technicians for the protection of semi-finished materials within the plant.

TEFOR: the first totally recyclabe laminate.

LIFE CYCLE ASSESSMENT (LCA)

The **Life Cycle Assessment** is one of the fundamental tools for implementing an Integrated Product Policy and is based on the ISO 14000 series of standards. The aim of the assessment is to establish the impact of the product on the environment, according to the so-called "Cradle to Grave" criterion.

This method requires the identification and quantification of the materials, energy consumption and emissions that influence the environment in all phases of the product's life cycle, starting from the extraction of the raw materials, through its production, use, re-use and eventual disposal.

The results of this study highlight the exceptional performance of HPL laminate as summarised below:

ABIOTIC DEPLETION

Correct processing of HPL elements after their long term use provides a 68% reduction in the effect on abiotic resources (through energy recovery).

BIOTIC DEPLETION

HPL and elements in HPL do not deplete economic resources such as wood; the life of an element in HPL is longer than the time it takes to re-grow a cultivated forest. Cellulose used for HPL production is obtained solely from cultivated forests.

OZONE LAYER DEPLETION

Throughout their entire life cycle, elements in HPL do not leave any negative impact on the ozone layer.

GREENHOUSE EFFECT AND ENERGY CONSUMPTION

6 m^2 of HPL can be produced with the same greenhouse effect as when producing only 1m^2 of aluminium of the same thickness. Over 8 m^2 of HPL can be produced with the same energy consumption as when producing only 1m^2 of aluminium of the same thickness.

ENERGY

Due to its high calorific power, (18/20 MJ/kg), HPL enables optimal energy recovery when no longer in use, through combustion in special thermovalorization plants.