A FACT BASED DRIVE FOR LASTING IMPACT

SUSTAINABILITY POSITION PAPER

Think Trespa

TRESPA®

INTRODUCTION

TRESPA IS A LEADING GLOBAL MANUFACTURER OF HIGH PRESSURE LAMINATE PANELS FOR USE IN EXTERIOR FAÇADE AS WELL AS IN SCIENTIFIC SURFACE APPLICATIONS.

LICENSE TO OPERATE (LTO) is the first strategic priority of Trespa's management and employees. LTO includes:

- Health and Safety of employees and the local community
- Product compliance to meet regulatory requirements
- Transparent reporting and appropriate behaviour by employees
- Sustainability and preservation of the Environment

Although LTO is ultimately the responsibility of top management at Trespa, the commitment of all employees is required to ensure these issues are properly addressed. Sustainability became part of Trespa's LTO strategy in 2010, following an initial survey of the environmental impact of the production site.

This paper consists of 7 chapters:

1. Philosophy and beliefs
2. Sustainability policy
3. Progress on site efforts (2011-2015)
4. Measuring environmental impact (LCA 2015)
5. Closing of improvement initiatieves 2011-2015
6. Continue site efforts on material saving and energy reduction
7. Sustainability approach 2017-2020

Trespa has chosen 'the environment' as the starting point for its sustainability efforts, which cover the following four topics:

- Prevention of pollution
- Sustainable resource use
- Climate change mitigation and adaptation
- Protection and restoration of the natural environment

This is the fourth position paper published by Trespa that describes the progress of sustainability initiatives and communicates new targets for improving sustainability performance. In recent years the accuracy of basic data has significantly improved and a program has been launched to reduce energy consumption and the production of waste material. A Life Cycle Analysis (LCA) was executed to assess the impact of these achievements based on 2015 production data, which was supported by thinkstep, a leading consultant in the area of sustainable development.

Trespa will restate its position when new results or other detailed information become available and will issue a new version of its position paper accordingly. In doing so, Trespa will clearly outline its progress as well as any change in its priorities.

After five years, the sustainability approach and position of the company were reviewed (2011-2015). Our philosophy and beliefs have not changed. The policy will be retained as a guideline for our efforts and the anchor of ISO 26000 will continue to be used going forward. Trespa is working on new goals for the next four years.

1 PHILOSOPHY AND BELIEFS

SUSTAINABLE DEVELOPMENT OFFERS TRESPA CHALLENGES AS WELL AS NEW OPPORTUNITIES

COMMON SENSE
Trespa will use a common sense approach in addressing the topic of sustainable development. Our sustainability strategy is based on thorough assessment of environmental impacts.

OBJECTIVE AND FACT-BASED AS WELL AS EFFICIENCY IN USE
Trespa believes in objective and fact-based analysis and has executed a cradle-to-gate LCA to map its environmental footprint along all relevant parts of the value chain. Trespa trusts that the LCA according to ISO 14040/44 is currently the most objective and fact-based method for assessing its environmental footprint. Trespa has executed an LCA and will use the results as a basis for new improvement initiatives. Output from LCA assessments are used in so-called Enviromental Product Declarations (EPD) which are issued by IBU Germany for the Trespa Exterior product range. These documents show the impact of a specific product when considering the environmental performance of an entire building.

Trespa will also continue to monitor alternative available methodologies and adopt those which are understandable, transparent and standardized and promote lasting improvements.

From a sustainability point of view, rear-ventilated façades, which are the main field of application of Trespa's exterior panels, bring various sustainability benefits to a building. These include energy saving, healthy indoor climate, low maintenance as well as lifetime extension and increased value through renovation.

INTEGRAL PART OF BUSINESS PLANNING AND REVIEW CYCLE
Trespa will set priorities based on the LCA and agree on realistic but challenging targets to achieve change. All sustainability initiatives have been integrated into Trespa's rolling business planning and review cycle in line with other License to Operate topics. The review cycle consists of annual target setting in the budgeting process, a monthly management review of progress measured in key performance indicators and inclusion of a sustainability paragraph in the annual report.

2 SUSTAINABILITY POLICY

ANY CHANGE SHOULD START WITH THE COMPANY ITSELF. TRESPA'S APPROACH TO SUSTAINABLE DEVELOPMENT IS FRAMED BY THREE BASIC PRINCIPLES

DO NO HARM
Trespa will comply with safety, product and sustainability regulations and guidelines set by the countries in which it operates. In addition, Trespa is targeting opportunities to minimize the environmental impact of its operations and products.

DO GOOD
Trespa will support its suppliers and customers in realizing their sustainability goals. Trespa is looking for opportunities that maximize the sustainability contribution of its products throughout the value chain, including their end-of-life use, e.g. ventilated façade cladding.

Moreover, Trespa will continue to look for opportunities and initiatives which support and promote longer term sustainable development beyond the immediate scope of its current operations.

DO BETTER
Finally, Trespa believes that investing in sustainable development should be beneficial to the company's long term position. Many sustainability challenges constitute opportunities that will allow the company to continue to grow.

3 PROGRESS ON SITE EFFORTS 2011 - 2015

IMPROVED UNDERSTANDING FROM LIFE CYCLE ASSESSMENT

Three clear focal points for Trespa's sustainability efforts have emerged from previous LCA's. These focal points were:

1. Upstream contributions from raw material production and transport
2. Primary energy use for Trespa's production processes
3. Onsite emissions originating from resin production and impregnation.

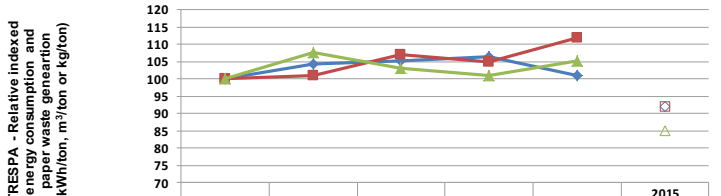
Trespa started a dialogue with its kraft paper suppliers to obtain more detailed information on material and energy usage in the kraft paper production process. More accurate data has been incorporated in the 2015 LCA.

Trespa also put a great deal of effort into improving the accuracy of the mass and energy balances of its own manufacturing processes. Detailed energy and mass balances were established for Trespa's HPL manufacturing process, including monthly power and gas consumption monotoring. The understanding of material and energy usage, and savings opportunities is still growing.

In line with the Multi Year Agreement (MJA3) of the Dutch government, a program was defined and documented as the Energy Efficiency Plan (EEP 2013-2016) with the ambition to reduce energy at the site by 2% annually. Significant energy users of the production lines have been identified and strictly monitored. Material savings have been addressed by scrap monitoring and waste reduction initiatives.

RESULTS

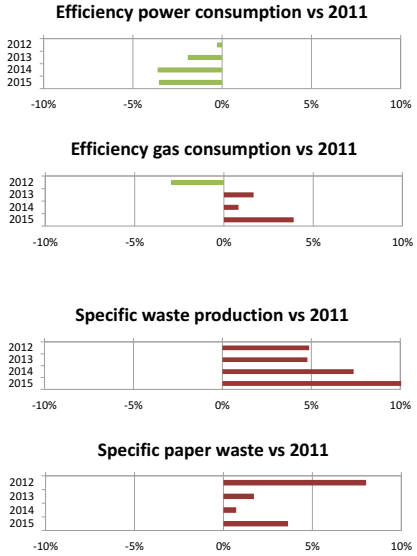
Annual targets have been set for energy reduction and onsite emissions, the relative impact of energy consumption and paper waste are depicted below.



	2011	2012	2013	2014	2015	2015 Target
Rel. electricity cons.	100,0	104,2	105,1	106,4	101,0	92,0
Rel. gas cons.	100,0	100,9	107,0	105,0	111,8	92,0
Rel. paper waste	100,0	107,8	103,1	101,0	105,3	85,0

The following charts show the trends of energy efficiency and relative waste generated.

Energy reduction of electrical power appeared to be fairly successful with a reduction of 3.5%. LED introduction for lighting and closure of older lines were the main contributors. Reduction of gas consumption was less successful and showed a conversion of trend due to the switch to rented steam boilers and a less efficient operation of waste gas combustion. Waste reduction initiatives of regular activities were counteracted with production waste as a result of the introduction of new products and processes. Trespa will continue to focus on stabilizing its production processes, consequently reducting material consumption.



4 MEASURING ENVIRONMENTAL IMPACT

RESULTS OF LCA 2015 FROM CRADLE TO GATE PERSPECTIVE

The LCA on HPL covers the total impact of the manufacturing footprint, including the extraction and processing of raw materials. Transportation of raw materials to the manufacturing site was accounted for. The analysis excluded effects during the usage and end-of-life phase, which need to be analyzed on a specific product level. Results were based on the production of 1 ton of HPL.

Environmental Product Declarations (EPD) are used as leading documents in the publication of sustainability results. In consultation with thinkstep, six key environmental indicators were selected in the LCA that are commonly agreed upon as most relevant to include in Environmental Product Declarations. These indicators cover emissions of substances with a negative impact on the environment (air, water and soil), emissions of greenhouse gases that contribute to climate change and depletion of energy resources both non-renewable and renewable. The LCA indicators are explained in attachment 2.

The LCA was updated with 2015 production data and also based on more accurate information on saturated kraft paper data and paper mix as used in Trespa's HPL manufacturing process.

Per ton HPL	Environmental impact dimensions	Units	2015 LCA
Climate Change	Carbon footprint (GWP)	Kg CO_2-Equiv.	1250
Primary energy consumption	Total Primary Energy	GJ	83.9
	Renewable energy share	%	32
Emissions to air, water and soil	Acidification (AP)	Kg SO_2-Equiv.	5.4
	Eutrophication (EP)	Kg P-Equiv.	2.92
	Ozone Depletion Potential (ODP)	Kg R11-Equiv.	7,40E-07
	Photochemical Ozone creation (POCP)	Kg Ethene-Equiv.	0.72

Trespa currently has EPDs available according to French (FDES), German (IBU) and British (BREEAM) assessment schemes based on the 2009 LCA results.

The process of revising and updating these EPD's has started. Publication of such EPDs is expected late 2017.

5 CLOSING OF IMPROVEMENT INITIATIVES 2011 - 2015

PROCESS EFFICIENCY AND CHAIN EFFICIENCY MEASURES

To ensure progress and positive impact on Trespa's environmental profile, Trespa has added the following list of targets to its business planning:

REDUCTION OF UPSTREAM CONTRIBUTIONS

- Saving on material consumption by reducing the relative amount of waste (in kg/ton HPL) by 15% at the end of 2015 compared to end of 2011.
- Detailing the specific contributions of chemicals and of woodchips with Trespa's suppliers.

REDUCTION OF PRIMARY ENERGY CONSUMPTION

- Trespa is aiming at reduction of energy usage and has a target set on energy efficiency improvement of 8% at the end of 2016 compared to reference year 2011 in line with the Multi Year Agreement of the Dutch government with the industry in the Energy Efficiency Plan 2013-2016

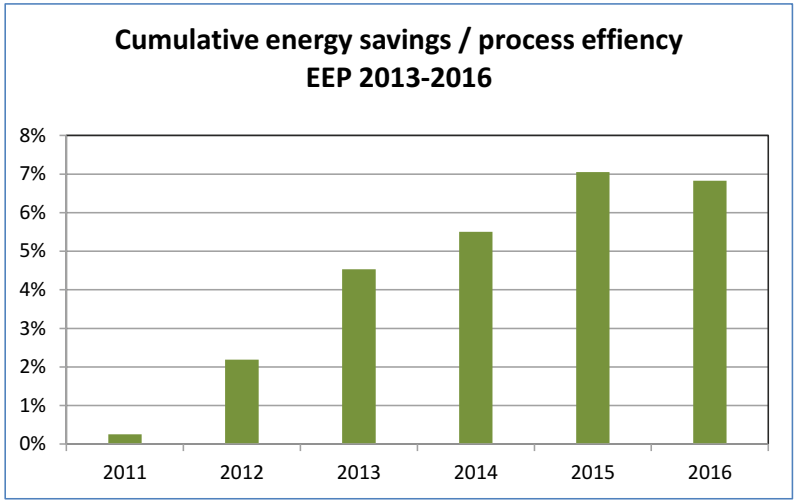
IMPROVED PROCESS EFFICIENCY

Natural gas

The steam boiler generation unit was shut down in 2012 to be replaced with an energy-efficient system based on best available technology. This project was delayed and as a result the infrastructure will be replaced completely at the end of 2016. Energy-efficient pumps have been installed. New steam boilers will be installed in 2017. A part of the replacement programme will consist of heat recovery from waste gas incineration. The overall project will be completed in 2018 with the installation of a new energy efficient waste gas incinerator. Expected savings on natural gas are significant.

In the meantime, two rented boilers have been operated and waste gas streams have been temporarily rerouted to the less efficient waste gas incinerator. This has resulted in 3.3% increased gas consumption until 2016, representing 900 tons of CO_2

New heating systems were installed to improve the climatization of production buildings. Also, various heaters were replaced or taken out of service. Savings on natural gas of 1.2% showed a reduction of 300 tons of CO_2.



5 CLOSING OF IMPROVEMENT INITIATIVES 2011 - 2015

PROCESS EFFICIENCY AND CHAIN EFFICIENCY MEASURES

Electrical energy

The production of semi-finished wood fiber intermediates requires a large amount of energy. A dedicated energy monitoring system was developed and installed along the production line in order to visualize energy consumption and improve process control at the shop floor. In addition, several energy reduction initiatives were implemented on electricity and pressurized air usage. A program was launched to better understand the relationship between process variables and energy demand.

All lighting was replaced by LED and presence detection sensors were installed in less frequently visited areas. Also, high energy consuming computers in the plant have been replaced by low energy satellites and a data server has been switched off. The total saving on electrical energy amounted to 3.5%.

Several high energy consuming electrical motors were replaced in the production areas. Also, continuously operating vacuum pumps, as used in the press department, were replaced by more efficient discontinuous venturi ejector systems. The total saving on electrical energy amounted to 0.3%.

Production of an older paper impregnation line was stopped in 2012. Production of substrate paper for décor intermediate product was outsourced. The total saving on electrical energy amounted to 0.8%.

One of the oldest press lines was stopped, after implementing efficiency improvements at other presses. The total saving on electrical energy amounted to 1.2%.

Other improvement initiatives

A laser treatment process was installed in order to clean press plates. The quality of cleaning improved significantly, so that tool life could be extended considerably and ineffective production time and energy usage by the press could be prevented, in order to regain 600 tons of annual capacity on the press line. In addition, savings were achieved on kraft and décor material and waste could be eliminated. Annually, a total capacity of ~0,6% was regained at the impregnation line.

CHAIN INITIATIVES

The amount of sawdust has been significantly reduced by optimizing the amount of edge trimming of HPL panels. The material saving contributed to 16.8 TJ savings on primary energy.

Polyethylene packaging film used to wrap pallets for shipping was removed, leading to lower use of materials at Trespa and less waste disposal at Trespa's customer premises.

Trespa agreed to the onsite pallets assembly line. Less efficient transportation of pallets could be prevented, resulting in less fuel consumption and corresponding CO2 reduction.

All refrigeration and cooling equipment containing the ozone-depleting R22 cooling agent have been replaced by more environmentally friendly cooling agents. Finally, Trespa pursued the PEFC and FSC chain-of-custody certification as part of Trespa's responsible sourcing strategy.

6 CONTINUE SITE EFFORTS ON MATERIAL SAVING AND ENERGY REDUCTION

KEEP MOMENTUM IN THE FACTORY TOWARDS SUSTAINABLE OPERATIONS

We will continue our efforts to reduce on site energy usage and waste, which is under our direct influence in our factory.

Energy Efficiency Plan 2017-2020

In search of further energy reduction, Trespa will focus on lowering gas usage, as this is related directly to CO2 emission. The completion of the steam boiler system is expected in 2018 with the installation of a completely new waste gas incinerator.

A large amount of steam and cooling energy is used during the press cycles. A pinch analysis will be started to get a better understanding of flows for heating and cooling in the various processes.

A detailed investigation of the energy consumption of the Dry Forming line has started and new leads have been found to reduce future electrical energy consumption significantly.

Energy efficient electrical motors will be selected when motors need to be replaced.

Increased awareness of material saving at all operational layers of Trespa could lead to many more reduction initiatives aiming at 5-10% scrap reduction annually.

7 SUSTAINABILITY APPROACH 2017-2020

LOOKING FOR STEP-CHANGE PROJECTS WITH SERIOUS IMPACT ON OUR SUSTAINABLE FOOTPRINT

A structural improvement takes longer to materialize and requires better understanding of the processes with respect to their impact. In order to create in-house knowledge and perform detailed studies an LCA-specialist has been recruited. With the capability to understand the impact of our processes, we want to identify true influencers – considered from the perspective of our environmental impact categories. Once these are identified and an improvement plan is made we will publish a new position paper. The paper is expected to be ready in the course of 2017 and will contain our approach for the next four years up to 2020.

ATTACHMENT
KEY ENVIRONMENTAL INDICATORS

EMISSIONS PARAMETERS

AP: Acidification Potential (sulphur dioxide equivalents):
The acidification of soils and waters occurs predominantly through the transformation of air pollutants into acids. This leads to a decrease in the pH-value of rainwater and fog from 5.6 to 4 and below.

EP: Eutrophication Potential (phosphate equivalents):
Eutrophication is the enrichment of nutrients in a certain place that results in a sharp decrease in oxygen availability in the local environment system. Eutrophication can be aquatic or terrestrial. Air pollutants, wastewater and fertilization in agriculture all contribute to eutrophication.

ODP: Ozone Depletion Potential (CFC 11 equivalents):
The ozone layer in the stratosphere (10-50 km height) is essential for life on earth. It absorbs short-length UV radiation which is important for preventing both earth temperature rise and skin cancer risks. Anthropogenic emissions such as CFCs and HCFC emissions contribute to the depletion of ozone in the stratosphere.

POCP: Photochemical Ozone Creation Potential (ethylene equivalents):
Photochemical ozone creation in the troposphere (closest to the earth's surface), also known as summer smog, is suspected to damage vegetation and material. High concentrations of ozone are also toxic to humans.

CLIMATE CHANGE PARAMETERS:

GWP: Global Warming Potential (carbon dioxide equivalents):
In addition to the natural mechanism, the greenhouse effect is increased by human activities. This results in a warming effect at the earth's surface.

RESOURCE DEPLETION PARAMETERS

PED: Primary energy usage
Primary energy is energy found in nature that has not been subjected to any conversion or transformation process (such as primary energy content in crude oil, natural gas, and biomass). Energy that has been converted - e.g. steam or other thermal energy derived in any technical process, or electricity -, requires primary energy to provide 'delivered energy'. Primary energy demand refers to the amount of energy that a system under assessment has extracted from the natural environment. It also includes energy stored in the final product.

Share of renewable energy
Renewable primary energy is a part of primary energy that can be naturally replenished (e.g. energy embedded in the wood material or from wind or hydro electricity), while the non-renewable energy comes from non-renewable resources such as fossil fuels or uranium.

Biogenic carbon (Potential carbon storage):
HPL products contain paper, wood chips as biomass. Carbon in that biomass comes from the carbon dioxide that was removed from the atmosphere during the biomass growth (thus, decreasing the concentration on greenhouse gases in the atmosphere). This carbon is released again at the end of life of the product (during incineration or disposal). In the current state of regulations (Greenhouse Gas Protocol, PAS 2050), the carbon storage for limited time is not considered to have significant impact on the global warming and is, therefore, not credited. In some cases, potential storage credit can still be reported as information. As this study focuses on identifying practical improvements in the TRESPA production system, the carbon credits for temporal carbon storage are reported separately and not subtracted from the total cradle-to-gate environmental profile.

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