

## TARKETT SpA

COMPANY CERTIFICATIONS		
SAFETY	QUALITY	ENVIRONMENTAL
UNI ISO 45001:2018	UNI EN ISO 9001:2015	UNI EN ISO 14001:2015

ENERGY SAVING INITIATIVES	
<p><b>Energy Management System ISO 50001</b></p>	<p><b>Energy Policy:</b> Tarkett SpA has implemented an Integrated Management System conforming to the following standards:</p> <ul style="list-style-type: none"> <li>- UNI EN ISO 9001:2015.</li> <li>- UNI EN ISO 14001:2015.</li> <li>- ISO 50001:2011.</li> </ul> <p>In 2009 the plant adopted the WCM (World Class Manufacturing) system which is perfectly harmonised with its management system and used for the development, application and maintenance of these systems.</p> <p>Specifically, Tarkett S.p.A. has identified the environmental and energy aspects linked to its products/activities/services which can be monitored and over which direct influence can thus be exerted.</p> <p>In accordance with a life cycle perspective Tarkett has also determined what environmental and energy impacts are potentially bound up with the aspects highlighted.</p> <p>In determining these aspects account is taken of:</p> <ol style="list-style-type: none"> <li>a) change, including planned or new developments together with new or modified activities, products and services;</li> <li>b) reasonably foreseeable abnormal conditions and emergency situations.</li> </ol> <p>The diverse operational situations (normal, abnormal and emergency) and production site environmental, geographical and historic characteristics are the basis for data and information collection regarding: the natural resources and energy used in the production process; the raw materials and chemical agents used; products; the waste produced; atmospheric emissions; waste water; environmental problems bound up with the local community; energy analysis (list of energy vectors, user lists, direct and indirect measurement of energy consumption in individual departments, prioritising); identifying reference consumption (initial energy audit); identifying energy performance indicators.</p>

**Energy goals and milestones:** the plant organises its objectives on 2 levels:

- 10-year macro-targets defined in accordance with European energy policies.
- Annual objectives, i.e. targets to be achieved annually to attain the outlined macro-objectives over the decade.

The currently applicable macro-goals, valid until 2020, identify 5 main categories: Energy, Water, Raw Materials, Waste and Recycling (internal waste material recovery, post installation and end of life).

**Organisational structure:** the system is structured into sectors, each of which is responsible for specific tasks and goals. Specifically:

- Plant Manager.
- Management representative.
- Head of Investment and Maintenance.
- Planned Maintenance (PM) pillar manager.
- Purchasing Manager.
- Head of the Energy Management System.
- Head of Production.
- Cost Deployment (CD) pillar manager.

**Actions for improving energy performance:**

Tarkett SpA has undertaken, or is in the process of developing, numerous actions to improve energy performance. This includes:

- Replacement of 1 chiller with a more efficient one.
- Replacement of obsolete engines with high efficiency ones (6 engines with IE2 efficiency class - high efficiency - with class IE4 engines - super premium efficiency).
- Production process optimisation (e.g. the rotation speed of the oxidation department machinery has been reduced while maintaining the same level of productivity, thus lowering energy consumption).
- Reorganisation of the layout of certain machines (e.g. post-combustors in which the aspiration conduit tubing needs to be upgraded in length and complexity terms with the most simple, shorter and lower loss trajectory).
- Efficiency of the diathermic oil and superheated water distribution system.
- Building shell efficiency with replacement of windows and doors.
- Replacement of 4 low efficiency compressors

	<p>with more efficient solutions equipped with inverters for automatic machine modulation. The compressors are also equipped with an automatic load allocation system to ensure machinery ages at the same rate;</p> <ul style="list-style-type: none"> <li>- Monitoring and management system for 900kW refrigeration unit.</li> </ul>
<p><b>Energy consumption reduction initiatives:</b></p>	<p>Each year the firm sets out energy (and other) initiatives completed in the previous year and those awaiting implementation (CARRY OVER), those planned in the near future and those needing some form of funding for implementation (CAPEX BUD).</p> <p>What follows is a list of action:</p> <ul style="list-style-type: none"> <li>- Process parameter optimisation to reduce the oxidation cycle time frames CARRY OVER.</li> <li>- New compressed air production system CARRY OVER.</li> <li>- New vapour condensation system TOP TEN CARRY OVER.</li> <li>- Further photovoltaic steps TOP TEN CARRY OVER.</li> <li>- Automatic system to optimise the use of CARRY OVER closed cycle chillers.</li> <li>- Reduced polymerisation time frames in Veneto 3.2 mm (Alolt) (R &amp; D) TOP TEN CARRY OVER.</li> <li>- New parameters for laminators and rosin casting units CARRY OVER.</li> <li>- Increased steam distribution line efficiency CARRY OVER.</li> <li>- Increased engine efficiency CARRY OVER.</li> <li>- Heat recovery (biomass and calendering) CARRY OVER.</li> <li>- Change of connection for leakage in mixing line 2 for Etrusco (modification of hopper before granulator) NEW ACTIONS 2020.</li> <li>- Lower consumption thanks to the change of the rolling mill motor to Calender NEW ACTIONS 2020.</li> <li>- Reduced polymerisation time frames and gas consumption in furnaces resulting from better air extraction NEW ACTIONS 2020.</li> <li>- Improved biomass boiler management (frequency and duration of cleaning for higher efficiency) NEW ACTIONS 2020.</li> <li>- Reduction of drying time by 10% for linoleum granules from cleaning activities during change over in mixing lines NEW ACTIONS 2020.</li> </ul>

	<ul style="list-style-type: none"> <li>- Reduced consumption of wood shavings through recycling of jute roll packaging NEW ACTIONS 2020.</li> <li>- Additional rooftop photovoltaic panels (50 kW) CAPEX BUD 2020.</li> <li>- Increased use of LED lights CAPEX BUD 2020.</li> <li>- New door and window frames (remaining part of the technical offices / workers' quarters) CAPEX BUD 2020.</li> <li>- Lower energy consumption associated with the replacement of one of the two chillers for the closure of the mixing line CAPEX BUD 2020.</li> <li>- New German extruder motor CAPEX BUD 2020.</li> <li>- Optimisation and insulation of the thermal oil pipeline CAPEX BUD 2020.</li> <li>- Reprocessing of dust, small pieces of cement and old pigments to generate new linoleum powder for drying in the oxidation department NEW ACTIONS 2020.</li> <li>- Improved stand-by management in the mixing line 2 NEW ACTIONS 2020.</li> <li>- Increased efficiency in Steam allocation (focus on Mingazzini too) CAPEX BUD 2020.</li> <li>- Increasing the tri-generation start-up time NEW ACTIONS 2020.</li> <li>- Reducing compressed air losses NEW ACTIONS 2020.</li> <li>- Heat insulation.</li> <li>- Process improvement.</li> <li>- LED lighting.</li> <li>- Co-generation plants.</li> <li>- Heat waste recovery.</li> </ul>
<p><b>Renewable Energy Sources</b></p>	<p>The electricity bought by Tarkett S.p.A. Is 100% green. It is hydroelectric and Guarantee of Origin certified (a certificate issued by Gestore Servizi Energetici, or GSE, which testifies to the renewable/green origin of the kWh sold).</p>

	<p>The plant is also equipped with:</p> <ul style="list-style-type: none"> <li>- 7 photovoltaic plants for a peak output of 294 kWp.</li> <li>- 1 geothermal heat pump plant.</li> <li>- 1 biomass boiler fed with wood chip and jute from the linoleum production cycle (waste recovery) with a nominal output on 500kW. In total, 32% of the plant's total consumption is covered through renewable sources.</li> </ul> <p>The remaining percentage is covered by a tri-generation plant which can produce electricity, thermal energy and refrigeration energy via natural gas combustion.</p> <p>Consequently, the company draws its electricity from solar panels, geothermal energy and biomass.</p>
<p><b>Water consumption reduction initiatives</b></p>	<p>The company has adopted numerous measures to reduce its water consumption.</p> <p>In particular, a distinction can be made between process water reduction and civil use water reduction strategies.</p> <p>In the first case the following has been done:</p> <ul style="list-style-type: none"> <li>- Rainwater collection.</li> <li>- Obsolete conduit maintenance to reduce losses and, in the case of steam, reduce the need for heat in the production cycle (energy needs are also reduced).</li> <li>- Configuration of the network via a closed cycle system (for the steam cycle it is not totally closed cycle).</li> <li>- Machinery optimisation/replacement. For civil use, on the other hand, the following strategies have been implemented:</li> </ul> <ul style="list-style-type: none"> <li>- Staff training</li> <li>- Water dispensing system optimisation via water loss reduction and the selection of best performance dispensers, etc.</li> </ul> <p>The industrial water cycle is 100% closed.</p>

ENVIRONMENTAL SUSTAINABILITY AND GREENHOUSE GAS REDUCTION INITIATIVES	
Global sustainable development goals	
<p><b>Global goal formalisation</b></p>	<p>As previously specified the firm identifies macro-objectives in the energy, water, raw material, waste and recycling areas.</p> <p>For 2020 the goals fixed are:</p> <ul style="list-style-type: none"> <li>- 100% of the materials used in the products are continuously third-party assessed and certified.</li> </ul>

	<ul style="list-style-type: none"> <li>- 75% of materials in the supply chain do not contribute to the 'resource scarcity' problem, i.e. natural resource impoverishment.</li> <li>- 100% of production sites have closed water cycles.</li> <li>- Compared to 2010 (baseline) the GHG atmospheric emissions are at least 20% lower.</li> <li>- All coatings/flooring are phthalate-free and low-emission.</li> </ul> <p>- 100% of the flooring solutions offer maintenance and installation procedures according to Cradle to Cradle principles.</p> <ul style="list-style-type: none"> <li>- Waste going to landfill is 0%.</li> <li>- The volume of flooring and coating collected and recycled downstream of installation (waste) or post-consumption is at least twice that collected in 2010.</li> </ul> <p>All these goals were achieved in 2019, in some cases going beyond reference targets (e.g. GHG emission reductions were 60% less than 2010, well beyond the 20% target fixed).</p> <p>The company is currently updating its macro-goals for the 2021-2030 period, taking into account the priorities mentioned above.</p> <p>The new impact2027 strategic plan focuses on 4 main pillars:</p> <ul style="list-style-type: none"> <li>• Offer customers a best-in-class experience.</li> <li>• Create innovative products and services.</li> <li>• Be in step with sustainability.</li> <li>• Strengthen the team with high performance.</li> </ul>
<p><b>Environmental policy document</b></p>	<p>The company has drawn up an integrated environment, quality and energy document capable of integrating environmental management (ISO 14001) and energy management (ISO 50001) needs with workplace health and safety (OHSAS 18001) and quality (ISO 9001) requirements.</p> <p>The body tasked with implementing the integrated plan is the whole of sector heads present inside the plant together with plant managers and a management representative.</p> <p>The main sustainability-related innovations introduced at the company include the installation of a biomass boiler with in-house production of the biomass used as fuel, the installation of a tri-generation plant and geothermal heat pumps, the closure of the water cycle for production, the closure of the waste cycle, and the application of the WCM (World Class Manufacturing) approach for the recognition and resolution of leaks.</p>

	<p>The vision is to become the most sustainable flooring and sports surface company through its CO<sub>2</sub> reduction and circular economy ambitions. While striving to protect resources and mitigate the effects of climate change, sustainability is at the core of its strategy. Thus, the company is committed to reducing CO<sub>2</sub> emissions and the consumption of raw resources while maintaining high product performance. The quest for “more and more” is pushing our limits and threatening our planet.</p> <p>The situation has to change. We have to find a way to offer more with less. To the company this means less waste, less emissions, more welfare and more trials. Doing more with less is the company's commitment, mission and mindset.</p>
<p><b>Changes determined by sustainability strategies:</b></p>	<ul style="list-style-type: none"> <li>- In the business model: Optimisation of the purchase process, integration of purely process aspects with themes such as energy efficiency.</li> </ul> <p>In company processes:</p> <ul style="list-style-type: none"> <li>- Management and control of production processes based not solely on production aspects but also energy/environment parameters (for example, reductions in the rotation speed of the machines used in the oxidation process). (implemented)</li> <li>- Adoption of environmentally friendly vehicles for the corporate fleet (being implemented).</li> <li>- Remote working systems (teleconferencing, remote working, etc.) (implemented).</li> <li>- Promotion of car pooling, use of bicycles and public transport, etc. (implemented).</li> <li>- Changes to packaging from an environmental perspective (implemented).</li> </ul>

<p><b>Purchases and supplies</b></p>	
<p><b>Primary raw materials used and their origin</b></p>	<p>Tarkett linoleum is still manufactured using the traditional formula from 1898, using mostly natural and renewable raw materials, with an eye for the environment and for present and future generations.</p> <p>The main raw materials used for the production of Tarkett linoleum are:</p> <ol style="list-style-type: none"> <li>a) Linseed oil obtained from linseed oil pressing.</li> <li>b) Wood flour obtained by pulverising wood processing waste.</li> <li>c) Cork flour made from the outer bark of cork oak which can be removed without damaging the plant.</li> </ol>

	<p>d) Jute, a textile plant fibre taken from plants from the corchorus family.</p> <p>e) Resin (rosin): a solid residue resulting from the distillation of plant resins from various species of pine and conifer.</p> <p>f) Pigment, potassium permanganate, titanium dioxide, an additive used to obtain the various colours.</p> <p>g) Wax: surface finish to preserve the product during use.</p> <p>h) Calcium carbonate, the constituent property, either wholly or in part, of a great variety of rocks including marble, limestone and travertine.</p> <p>l) A polyurethane foam that gives the product sound proofing properties (used on certain product lines only); j) Linoleum powder obtained from the pulverisation of linoleum waste that are reintroduced into the production cycle as “raw material”.</p> <p>k) Carbostearate: acid composed mainly of calcium carbonate with added calcium stearate.</p>
<p><b>Environmental criteria in supplier selection</b></p>	<p>100% of the company's suppliers are selected in accordance with environmental criteria.</p> <p>In particular, the following are assessed:</p> <ul style="list-style-type: none"> <li>- Supplier social, environmental and safety certifications.</li> <li>- Supplier proximity (short circuits) where possible.</li> <li>- Fair trade products selected, where possible.</li> </ul>
<p><b>Promotion of action to get suppliers involved on environmental themes</b></p>	<p>Through communication/collaboration with suppliers (especially long-term suppliers) regarding safety, quality and environmental issues, the production/supply of raw materials from the manufacturer was optimised.</p>
<p><b>Adoption of raw material reduction initiatives</b></p>	<p>In addition to reintroducing waste generated in the production phase into the production cycle (pulverised and reintroduced as raw materials, thus reducing the total volume of new raw material used in production), the firm has launched the Re-start project.</p> <p>This project involved supplying installers with special bags in which to collect material eliminated in the installation phase.</p> <p>In this way rather than being sent to landfill or broken up, a further reduction of the raw materials used in the production cycle can be implemented.</p>
<p><b>Sustainable purchase policy for travel</b></p>	<p>Skype meetings (teleconferencing) are</p>



	<p>incentivised.</p> <p>In the near future the firm will attempt to increase the use of public transport.</p>
<b>Sustainable purchase policy for consumables</b>	<p>Development underway. Of the potential strategies identified priority will be given to the use of recycled paper and rechargeable ink cartridges.</p>
<b>Sustainable purchase policy for food and drink</b>	<p>Treated water dispensers are currently installed at the site (using mains water) and the use of steel flasks, compostable glasses and palettes in drinks distributors and recycling in the canteen area has been introduced.</p> <p>With a view to going plastic-free the use of flasks has also been encouraged outside the firm by distributing flasks in certain parts of the neighbourhood.</p>

<b>Production</b>	
<b>Green services/products</b>	<p>Approximately 42% of the company's overall turnover comes from the sale of "green" products.</p>
<b>Product innovations designed to replace dangerous chemical substances</b>	<p>Product innovations designed to replace dangerous chemical substances.</p> <p>To reduce the use of dangerous substances the firm has enacted a C2C (Cradle to Cradle) approach, in conjunction with EPEA.</p> <p>In accordance with this approach, as compared to conventional recycling, the quality of the raw materials is maintained through multiple product life cycles using 'safe chemical agents' only. In particular, the production processes, use and reuse of products take a form which enables raw material quality to be conserved through numerous life cycles.</p> <p>This means: no waste and everything, at the same time, constitutes nutritional substances.</p> <p>The right materials are used in infinite cycle (metabolisms) in the right place at the right time.</p>
<b>Adoption of production process environmental certification trajectories</b>	<p>The company has pursued a range of certification trajectories:</p> <ul style="list-style-type: none"> <li>- Product Carbon Footprint in accordance with ISO14067 standards, the benchmark used to estimate greenhouse gas emissions expressed in kg or tons of equivalent CO2 caused by a product. Specifically calculations were done for a family of company products. Falls under Environmental labelling type II.</li> <li>- Environmental Product Declaration (EDP)</li> </ul>

	<p>according to ISO 14025 standards: a certified environmental product statement which supplies product environmental impact calculated via an LCA approach in accordance with the ISO 14025 international standard. Falls under Environmental labelling type III.</p> <ul style="list-style-type: none"> <li>- Environmental Management Certificate (EMC), certificate pursuant to ISO 14001 standards.</li> <li>- Life Cycle Assessment (LCA) is a structured and internationally standardised method serving to quantify the potential impact of a product or service on the environment and human health from the starting point of resource consumption and emissions.</li> <li>- The Cradle to Cradle (C2C) approach. On the basis of the results obtained through the certification of its products the firm always considers potential environmental impact when new products are developed.</li> </ul>
<b>Presence of a document communicating atmospheric emissions</b>	Yearly atmospheric emission communications to ARPA Umbria.
<b>Participation in environmental innovation research projects</b>	<p>Through:</p> <ul style="list-style-type: none"> <li>- European Union public funds for international and national projects.</li> <li>- European Union public funds for regional projects.</li> <li>- National public funds.</li> </ul>

<b>Waste Management</b>	
<b>Recycling and appropriate waste management improvement initiatives.</b>	<p>In 2019, the company generated 582.5 tons of waste.</p> <p>92.8% of this was sent for recycling at other production cycles. The remaining 7.8% were sent for off-site processing.</p> <p>Specific training courses and waste collection points were set up to encourage separate waste collection.</p>
<b>Waste processing and waste reduction initiatives</b>	<p>Various projects have been set up for waste reduction purposes:</p> <ul style="list-style-type: none"> <li>- ReStart: product waste recovery in the product installation phase.</li> <li>- Distiller for liquid waste: liquid waste purification process prior to collection network discharge.</li> <li>- Reuse of packaging and pallets employed in end product packaging and transport.</li> </ul>
<b>Environmental impact improvement targets</b>	<p>As specified in the points above, in accordance with global sustainable development goals, the firm set itself macro-goals to achieve by 2020 and these are due to be upgraded with new 2030 targets.</p>

	<p>Together with these macro-goals targets to be achieved are also set on a yearly basis. For waste, in particular, a reduction of 96.93% of the total volume of waste over 2010 levels has been achieved. This means that instead of being sent to landfill the waste produced is sent for recycling or other treatment for the production of new raw materials, energy, etc.</p>
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<b>Innovation and research</b>	
<b>Investment in innovation and research</b>	<p>Around 5% of profits are used for research and development. The management of the action/investment needed to pursue the firm's environmental objectives will be the task of various company departments, such as Purchasing, Investment and Maintenance, as well as the technical office and the plant's energy manager.</p>
<b>Direct atmospheric emissions reduction initiatives</b>	<p>Emission abatement systems have been installed in the various emission points present within the plant and these are subject to constant maintenance to ensure appropriate functioning.</p>

<b>Staff training</b>	
<b>Staff awareness raising and training designed to reduce environmental impact</b>	<p>Specific training courses have been held inside the firm which 50% of plant staff attended, a total of approx. 2000 training hours (200 of which were on environmental issues).</p> <p>Company policy is also explained and communicated to staff on a range of channels such as: social media, active participation in public events, etc.</p>

<b>Client relations</b>	
<b>Marketing policies designed to highlight product sustainability</b>	<p>When it comes to communicating environmental information of products to the public/customers, this information is promoted through a number of channels:</p> <ul style="list-style-type: none"> <li>- The company's website.</li> <li>- Participation at trade fairs and conferences.</li> <li>- Explanatory brochures.</li> <li>- EPD drawn up pursuant to ISO 14025, made available to the public.</li> </ul>

<b>Relations with local government and the community</b>	
<b>Working together with the local council on community sustainability projects and initiatives</b>	<p>Projects developed with local authorities have included:</p> <ul style="list-style-type: none"> <li>- Plastic-free projects in schools, including steel flask distribution.</li> </ul>

	<ul style="list-style-type: none"> <li>- The “Let's Clean the World” project with staff taking a direct part in cleaning community spaces.</li> <li>- Legambiente’s sustainable towns initiative.</li> </ul>
<b>Participation in competitive tenders requiring environmental criteria</b>	Almost all calls for tenders in which the company has participated in the last 5-year period have environmental criteria among the selection criteria.
<b>Access to public incentives for green process/product development</b>	<p>The company has made use of various incentives. These included:</p> <ul style="list-style-type: none"> <li>-Call for Large R&amp;D Projects from the Revolving Fund for Business Support and Research Investment resources.</li> <li>-Call for Energy promoted by the Umbria Region, Support of the Renewable Energy Sources and Energy Saving Production System.</li> <li>-White Certificates, negotiable securities certifying the achievement of savings in energy end-use through energy efficiency measures and projects.</li> </ul>
<b>Membership of business associations and networks</b>	Membership of Confindustria Umbria
<b>Direct joint working with business networks and associations</b>	Continuous cooperation with Confindustria Umbria (e.g. through the Terni Urban Re- generation project) and higher technical institute schools.
<b>Initiatives and activities in schools</b>	<p>The company has undertaken a range of initiatives with schools, including:</p> <ul style="list-style-type: none"> <li>- Company visits to raise awareness of the production process and the strategies pursued by the company in various aspects including the environment.</li> <li>- Lessons in schools.</li> <li>- Student internships.</li> <li>- Graduate thesis partnerships.</li> </ul>