

PRESS RELEASE

Cologne (Germany), 22-25 October 2013

For immediate release

Radigreen® for sports and landscaping: RadiciGroup at the international FSB trade fair.



From 22 to 25 October 2013, the FSB International Trade Fair for Amenity Areas, Sports and Pool Facilities in Cologne is the showcase for Radigreen® artificial grass yarn. During the four-day event, Tessiture Pietro Radici SpA (TPR), the ancestral RadiciGroup company and the only supplier worldwide to offer a complete range of artificial grass yarn in both nylon and polyolefin, is introducing its latest innovations for the sports and landscaping sectors.

Focus on:

- **The new Radigreen® HD PE line of long-lasting fibrillated yarn and the Radigreen® MFL PE PAT monofilament range.**
- **The Radigreen® MFL PA family of 100% polyamide monofilament.**
- **My Radigreen®, an exclusive All-in-One combination of straight and textured monofilament for carpets, featuring exceptional softness, excellent coverage and light weight.**

Quality, environment and safety: a concrete commitment for Tessiture Pietro Radici, which was recently awarded two important management systems certifications: UNI EN ISO 14001:2004 for the environment and BS OHSAS 18001:2007 for occupational health and safety.



RadiciGroup's challenge on the sustainability front continues. From the beginning to the end of its production chain, that is, from monomers to engineering plastics, synthetic fibres and nonwovens, RadiciGroup is committed to measuring the environmental impact of its production chain systematically and rigorously so as to provide information based on verified and comparable scientific data.

Radigreen® polyamide and polyolefin artificial grass yarn is back at the Cologne FSB fair. The Group boasts many years of experience in this sector (*today Tessiture Pietro Radici is the third largest producer of artificial grass yarn in the world*), and its trade name Radigreen® has come to stand for high quality, safety in use and performance. Radigreen® means tailor-made products developed to best meet customer needs and expectations in any specific field of application: from **sports** (synthetic turf for football, golf, hockey, 5-a-side football, American football, rugby) to **landscaping** (indoor and outdoor artificial grass for the residential and commercial sectors).

At FSB Focus on ...

RADIGREEN® HD PE and RADIGREEN® MFL PE PAT: DESIGNED FOR DURABILITY.

Radigreen® HD PE and Radigreen® MFL PE PAT are RadiciGroup's latest products for the artificial grass market and are specifically designed for sports applications to fulfil one of the primary requirements of this particular sector: a fibre that lasts over time while keeping the technical characteristics of the turf unchanged for the longest time possible and preventing degradation caused by sun radiation. Radigreen® HD PE is a new range of fibrillated yarn, the combined result of the evolution of production technology and the use of high-performance polymers. Radigreen® MFL PE PAT is a new range of monofilaments.

"Today our application sectors and target markets are focusing their attention on a specific yarn performance requirement: durability," Marianna Panico, *Tessiture Pietro Radici R&D manager*, explained. "Consequently, that is the direction our product development has taken. From choosing the polymer and processing technology to determining the cross-section shape of the yarn, we have worked on making high-durability, high-weavability yarns keeping in mind the ease of installation and maintenance of the synthetic turf. In the case of Radigreen® HD PE fibrillated yarn, we have used special polymers specifically designed to achieve high tear resistance, and we have invested in a new innovative fibrillation technology. For the MFL PE PAT monofilament, we have developed a solid cross-section shape, free of intrinsic weakness, and have selected a polymer that allows us to achieve superior tuft lock performance, an important feature for the yarn."

"We have an ongoing commitment to collaborating with our customers, with the goal of providing the best solution for the end use," Ms. Panico concluded. "It is a step-by-step process, a constant dialogue that leads us to developing tailor-made products and special additivated products, endowed with specific characteristics and ensuring the highest technical performance in their final use."

RADIGREEN® HD PE

Key characteristics ...

- Good weavability
- Ease of installation and maintenance
- High wear resistance over time

TPR production technology produces clean and precise fibrillation, which is essential to prevent the fibre from weakening. RADIGREEN® HD PE yarn can withstand prolonged stress by developing a self-twisting property, a helix effect that strengthens the yarn by increasing resilience and split resistance.



RADIGREEN® HD PE yarn ensures a uniform and homogeneous playing surface with good resilience and ball roll.

[For all the details see the Radigreen® HD PE data sheet](#)

RADIGREEN® MFL PE PAT



A solid cross-section shape makes RADIGREEN® MFL PE PAT the highest-performing monofilament in its family in terms of wear resistance during prolonged use. PAT is the result of TPR's many years of experience in the sports yarn sector and the close collaboration of RadiciGroup's vertically integrated production companies: its polymer producers and the Radigreen® team. In order to enhance wear resistance without affecting softness and resilience, we made RADIGREEN® MFL PE PAT from a mix of special polyethylene resins, purposely selected and

accurately dosed to strengthen the yarn over its entire cross-section.

▪ Advantages

Unbeatable wear resistance (over 40,000 Lisport cycles)
Excellent UV stability – the right balance of softness and resilience

▪ Non-toxicity certification

Lead and plasticizer free (US Consumer Product Safety Commission Normative CPSC-CH-1002-08, Determination of total lead content, and EN 14372 Plastics, determination of phthalate content).

[For all the details see the Radigreen® MFL PE PAT data sheet](#)

RADIGREEN® MFL PA: ALL OF RADICIGROUP'S KNOW-HOW IN THE CHEMISTRY OF NYLON.

The polyamide monofilament product range is the result of the expertise of the Tessiture Pietro Radici R&D team, which can count on the know-how acquired by RadiciGroup, one of today's leading producers of nylon. Knowledge of raw materials, the production process and the final application; production flexibility and the capability to customize the yarn: all these factors make it possible for TPR to design and develop monofilament based on novel nylon resin formulations – products featuring high quality and safety.



TPR provides two main types of nylon monofilament: very thin **textured monofilament**, ideal for tufting very compact and resistant synthetic turf; and **straight monofilament**, combining softness and resilience, ideal for landscaping applications.

[For all the details see the Radigreen® MFL PA data sheet](#)

MY RADIGREEN®: ADVANTAGES OF ARTIFICIAL GRASS FOR THE LANDSCAPING SECTOR.

Reduced water consumption. Minimal maintenance. No pesticides needed. An evergreen lawn. These are a



few of the chief advantages of synthetic turf in residential and commercial applications. For the landscaping market, Tessiture Pietro Radici offers My Radigreen® (where MY stands for Multi-Yarn), a range of exclusive products that give turf makers maximum creativity, freedom and colour flexibility. Among the

available MY Radigreen® products:

- Straight PE monofilament + textured PP monofilament
- Straight PE monofilament + textured PE monofilament
- Straight PE monofilament + textured PA monofilament

[For all the details see the MY RADIGREEN® data sheet](#)

MY RADIGREEN®: SYNTHETIC GRASS ITALIAN STYLE ...

What about Italian creativity in the promotion of sustainability? It was on display in a recent installation set up in Bergamo for the international event “**Masters of Landscape - International Meeting of the Landscape**



and Garden”. The place chosen was Piazza Vecchia [the Old Square] in Città Alta [the Upper Town], one of the most charming places in Bergamo and one of the most beautiful squares in all of Italy. On that occasion, the square was all decked out in green and transformed into a magnificent garden and outdoor living room.

One of the ambitious objectives of the “Master of Landscape” event – co-sponsored by Radigreen® and its customer **SIT-IN SPORT** – was to raise **sustainable development awareness**. The entire pavement of the Old Square was covered with synthetic turf made by SIT-IN SPORT using MY Radigreen® yarn. Tessiture Pietro Radici and SIT-IN SPORT played leading roles in showing how the outdoor use of artificial grass and synthetic turf could bring value to public and private spaces alike, opening up possibilities for unexpected uses of such spaces and making outdoor areas more liveable.

“**Masters of Landscape - International Meeting of the Landscape and Garden**” was a unique event with a landscape theme organized by the Municipality of Bergamo and the Arketipos association. It took place from 7 to 22 September 2013, following the great success of prior year exhibits attended by over 200,000 visitors. **Watch the [video](#).**

MORE ON SUSTAINABILITY ...

Quality, the environment and safety are a concrete commitment for Tessiture Pietro Radici, which in recent months was awarded two important certifications: UNI EN ISO 14001:2004 for its environmental management system and BS OHSAS 18001:2007 for its occupational health and safety management system. As pointed out by **Enrico Buriani**, *managing director of TPR*, it was an important achievement on the sustainability front that required effort, resources and the utmost commitment on the part of all Tessiture Pietro Radici staff at all levels. These motivated employees, working as a team, showed awareness of and participated actively in the environmental and occupational topics covered by the 14001 and 18001 standards.



RadiciGroup's commitment to sustainability is ongoing...

The Group regularly reports on its actions and progress in its **Sustainability Report**, which is drawn up according to the **GRI (Global Reporting Initiative)** guidelines and includes a series of performance indicators – Economic (**EC**), Human Rights (**HR**), Labour Practices and Decent Work (**LA**), Society (**SO**), Environment (**EN**) and Product Responsibility (**PR**). All of these elements are of central importance, and RadiciGroup has undertaken the challenge to make sustainability a business tool, a key to innovation, a tenet of corporate culture and, in short, the approach to running its companies.

To RadiciGroup, sustainability means concrete action and results – from the beginning to the end of its production chain.

A few examples ...

Development of products made from renewable source materials and recycled materials – products that can contribute to reducing CO₂ levels.

Commitment to using renewable source energy and recycled materials from its own production chain or post-consumer recycling.

Commitment to reducing greenhouse gas emissions and energy usage.

Development, implementation and continual improvement, at all its companies, of policies on environmental and occupational health and safety management.

Development and definition of production chain *Product Category Rules (PCRs)* governing the procedures for:

- Measuring the environmental impact performance of its products using *Life Cycle Assessments (LCAs)*, so as to obtain specific *Environmental Product Declarations (EPDs)*.

Respect for and dialogue with all its stakeholders.

Support for projects and events aimed at safeguarding the environment in the communities where its companies operate.

Operating in a way that respects communities, people and cultures.

Joining the working group for the new European methods for calculating Product Environmental Footprints (PEFs) and the Organisation Environmental Footprint (OEF).

Raising its employees' awareness so as to develop a sustainability culture that is shared by everyone in the Group.



MEASURING ENVIRONMENTAL IMPACT SYSTEMATICALLY AND RIGOROUSLY

RadiciGroup is committed to measuring its environmental impact **systematically and rigorously from the beginning to the end of its production chain**, that is, **from monomers to engineering plastics**,

synthetic fibres and nonwovens, so as to provide **information based on verified and comparable scientific data**.

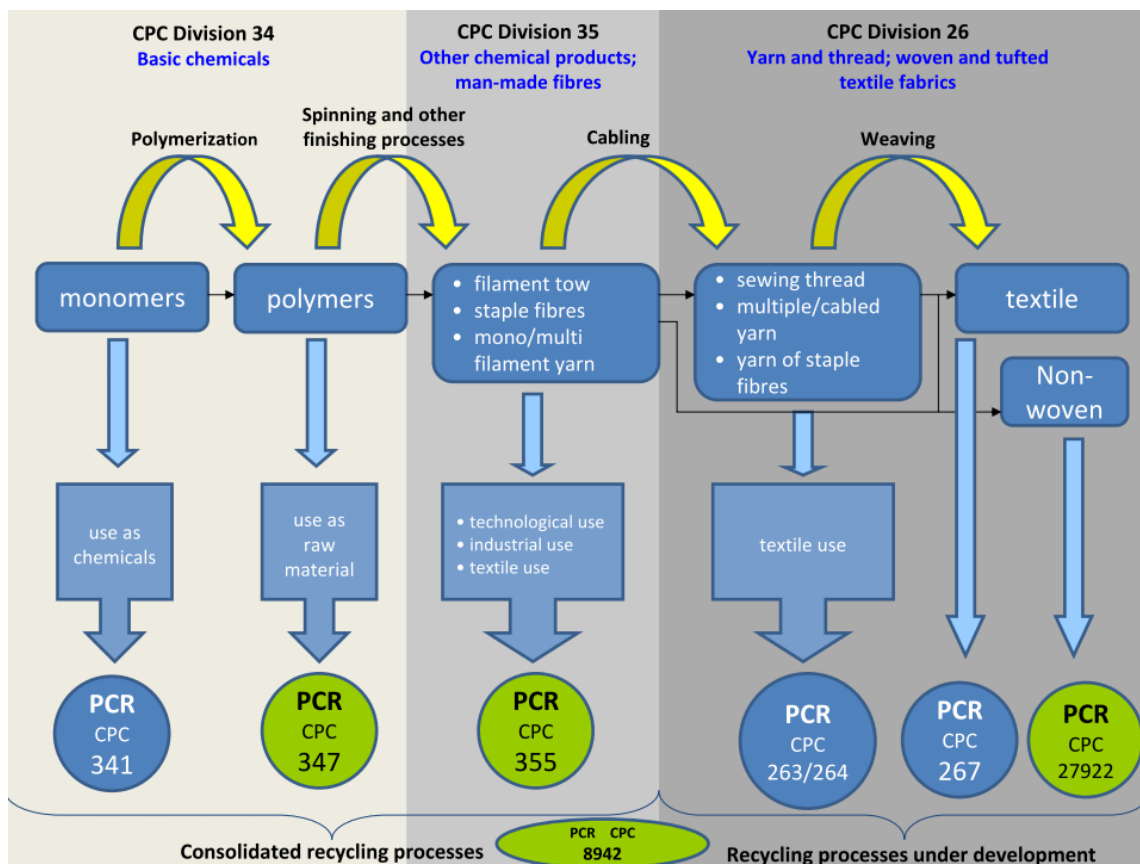
How?

First of all, through the development and definition of **Product Category Rules (PCRs)** for its production chain, which set down how to measure and quantify the environmental impact performance of its products using **Life Cycle Assessments (LCAs)**, in order to obtain specific **Environmental Product Declarations (EPDs)**. And that is not all. RadiciGroup, in particular Radici Chimica SpA, has recently signed an agreement with the Italian Ministry of the Environment to apply a new method to its production chain, on an experimental basis, to determine the **Product Environmental Footprint (PEF)** and the **Organisation Environmental Footprint (OEF)**.

This method was recently introduced by the European Commission to improve the availability of reliable and comparable information on the environmental performance of products and organizations, with the goal of harmonizing the different measurement methods available today.

Production chain PCR project.

RadiciGroup, through the Sweden-based **International EPD System**, has defined internationally accepted PCRs, specific to the products of the its plastics and fibres production chain: polyamides 6 and 6.6, from monomers to engineering plastics, synthetic fibres and nonwovens, and the recycling of all plastic scrap from its production chain.



This was a significant achievement for RadiciGroup – the result of about one year’s work on a conceptual and methodological approach that was truly an innovation in the industry. Indeed, the Group was the first multinational to present and propose the concept of a production chain PCR to International EPD System, from which it received positive feedback. Today the rules prepared by the Group and validated by International EPD System (one of the most highly regarded bodies in Europe) are an international reference point and model for any company in the industry that wants to measure the environmental impact performance of its production chain products. The “production chain” approach (polymers, engineering plastics, synthetic fibres and nonwovens) standardises the normative application of the LCA rules, which in turn facilitates the preparation of the EPDs for all the products of the Group. This puts RadiciGroup in position not only to assist its downstream customers to obtain an equivalent certification for their products, but also to objectively assess the environmental awareness of their suppliers.

Now that it has defined its production chain PCRs, RadiciGroup is working on obtaining EPDs for its products, as well as applying, on an experimental basis, the new European method for calculating product (PEF) and organisation (OEF) environmental footprints.

RADICIGROUP Production and sales sites in Europe, North America, South America and Asia. Diversified businesses focusing on chemicals, plastics and synthetic fibres. Know-how. Vertically integrated nylon production. Constant commitment to guaranteeing its customers quality, sustainable innovation and reliability. All this is RadiciGroup, a leader in nylon chemicals. RadiciGroup products are used in applications such as apparel, sports, furnishings, automotive, electrical/electronics, home appliances and consumer goods. WWW.RADICIGROUP.COM RadiciGroup, with its Chemicals, Plastics and Synthetic Fibres Business Areas, is part of a larger industrial group that also includes textile machinery and energy businesses. WWW.RADICI.COM

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