



NPE2015: THE INTERNATIONAL PLASTICS SHOWCASE

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COME AND VISIT US South Hall-STAND S23040

PRESS RELEASE

Orlando, Florida USA 23 – 27 March 2015

NPE: RadiciGroup is focusing on its nylon specialities and its complete extrusion product line

Represented by its American subsidiary, Radici Plastics USA Inc., the RadiciGroup Plastics Business Area – a world leading manufacturer of a wide range of nylon, PBT, TPE and POM engineering plastics – is back at the NPE international plastics trade show.

At the event, the focus is on:

RADILON® AND RADISTRONG® NYLON SPECIALITIES

<u>RADILON® enhanced heat-resistant specialities</u>, from the more traditional HHR nylon 6.6 engineering polymers, featuring excellent high heat-ageing resistance at air temperatures of up to 210°C, to the new RADILON® XTreme line developed for hot-air applications at continuous service temperatures of up to 230°C. <u>RADISTRONG®</u> long-fibre reinforced PA6 and PA6.6 specialities, ideal for metal replacement applications. <u>Radilon® D</u>, nylon 6.10 engineering plastics.

<u>RADILON® DT</u>, nylon 6.12 long-chain engineering plastics.

A BROADER RANGE OF EXTRUSION PRODUCTS

From the conventional RADILON® nylon engineering plastics to the RADILON® XTreme, RADILON® D and RADILON® DT specialities, HERAFLEX® thermoplastic elastomers and HERAFORM® acetal copolymers.



WEDNESDAY, 25 MARCH - 10.30 AM

South Hall - STAND S23040

Erico Spini, *marketing & application development director of RadiciGroup Plastics*, and Bryan Fox, *marketing & application development manager of Radici Plastics USA Inc.*, are giving a talk: *Advances in Innovation*. This year from 23 to 27 March, after the Plastindia event in Asia, the RadiciGroup Plastics Business Area – represented by its subsidiary Radici Plastics USA Inc., with production and sales sites in North America since 1998 – is in Orlando, Florida USA, as an exhibitor at the international plastics trade show NPE2015. The event, which has been held once every three years since 1946, is poised to beat its previous records in all departments: number of exhibitors (over 2,000), number of expected visitors (over 60,000) and amount of exhibit space (over 98,480 square metres). These impressive figures are a reflection of the importance and value of the plastics industry worldwide.

"At this year's NPE taking place at the Orange County Convention Center in Orlando, we are focusing our attention on our high performance engineering plastics from the RADILON® and RADISTRONG®



lines," said Michael Cain, CEO of Radici Plastics USA Inc. "These products ensure the highest performance and sustainability and are getting a great response from our markets, particularly electrical and automotive, of which the latter still presents the greatest opportunities for growth. In the NAFTA area, there are good prospects for growth in the transport and industrial markets as well, and the development of products for new applications in these two sectors is constantly ongoing. The NPE event provides a showcase for

our range of extrusion products, from conventional polyamide engineering plastics to specialities, thermoplastic elastomers and acetal copolymers."

"Radici Plastics USA closed its 2014 fiscal year with total sales revenues of 70 million dollars," Mr. Cain concluded. "Now our goal is to acquire new market share. During the next five years we expect a yearly growth rate higher than the average market growth rate. Of all the NAFTA area countries, we are looking with special interest at Mexico, a country where the automotive industry is experiencing a period of promising growth."

RADICIGROUP BRANDS AT CENTRE STAGE AT NPE...



HIGHEST PERFORMANCE WITH RADILON® HHR AND RADILON® XTREME

At NPE2015 the RadiciGroup Plastics Business Area is exhibiting its RADILON® HHR line of nylon specialities with enhanced heat resistance, together with its RADILON® XTreme line of products featuring even higher performance.

RADILON® HHR

Radilon® HHR nylon 6.6 engineering plastics feature excellent high-heat ageing resistance at temperatures



of up to 210°C.

They are suitable for injection and blow moulding and are available in 15%, 20% and 35% glass-fibre-filled versions. Moreover, they have a high safety factor and can thus be used as metal or special polymer (PPS, PPA, PA46) replacements.

Radilon® HHR products were formulated using a special RadiciGroup technology that allows for a dramatic reduction in mechanical properties degradation in materials at service temperatures of up to 210°C in air. **RADILON®** A **RV350HHR** is the ideal solution for applications such as **intercooler end caps, turbo ducts and resonators**.

RADILON® XTREME

The recent addition of the new RADILON® XTreme speciality line to the already existing RadiciGroup HHR line has extended the application temperature range of this class of products. RADILON® XTreme materials were developed for hot-air applications at continuous operating temperatures of up to **230°C**, through a synergistic collaboration of the RadiciGroup Plastics and Chemicals Business Areas. RADILON® XTreme engineering plastics are mainly used in **automotive** (turbo air ducts, EGR head exchanger components and resonators) and **electrical** applications (high-temperature electrical insulation components).

Key RADILON® XTREME technical characteristics...

Melting temperature, 280°C (+20°C compared to PA6.6); glass transition temperature, 90°C (+20°C compared to PA6.6); moisture absorption at saturation, 7% (-25 % compared to PA6.6); viscosity grades suitable for injection and blow moulding.

RADISTRONG®

Radistrong® specialities are available in nylon 6 and 6.6 versions. Due to their characteristics, they are ideal for metal replacement in critical applications (with high operating temperatures or mechanical and thermal stress for long periods of time), where high performance not attainable by traditional engineering plastics is required. The new Radistrong® long-fibre specialities are manufactured by pultrusion and are available with from 20% to 60% glass-fibre or carbon-fibre fill. Application sectors include: automotive and household appliances.

Main advantages of the new Radistrong® long-fibre specialities compared to conventional polyamides: superior impact strength, improved creep and fatigue resistance, greater mechanical resistance and stiffness at high temperatures.

RADILON® D AND RADILON® DT: RADICIGROUP PA6.10 AND PA6.12 ENGINEERING PLASTICS

RADILON® D

Ideal for injection and extrusion moulding, these materials are produced from PA6.10, a biopolymer obtained from sebacic acid (64% by weight). Sebacic acid is a product of natural origin extracted from the seeds of the



castor oil plant, which is grown mainly in India and China in semi-arid regions and, for this reason, does not compete with agricultural food products.

Radilon® Ds ensure a high level of sustainability, as well as excellent performance. These RadiciGroup PA6.10 polyamides reduce the environmental footprint

of the final product, while featuring properties that are the equivalent of, if not superior to, those of conventional polyamides.

Compared to PA6 and PA6.6, RADILON® D polyamides show ... reduced moisture uptake, less loss of tensile strength and tensile modulus under wet conditions, better chemical resistance to zinc chloride and calcium chloride, and improved glycol resistance.

RADILON® Ds are ideal for automotive applications such as: fuel lines, fuel line connectors, pneumatic conduit, brake conduit and under-the-bonnet components.

RADILON® DT

Long-fibre nylon 6.12 engineering plastics with good mechanical properties and excellent chemical resistance, even to zinc chloride solutions. **RADILON® DTs** feature high impact strength, good heat ageing resistance and excellent chemical resistance.

Furthermore, RADILON® DTs ensure:

- Good hydrolysis resistance
- Exceptional resistance to stress cracking even in contact zones between conduits and fittings
- Good dimensional stability because of low moisture absorption

RADILON® DTs are ideal for applications in the automotive and industrial sectors.



RADILON®, HERAFLEX® AND HERAFORM®: A BROADER AND MORE COMPLETE EXTRUSION PRODUCT RANGE

At NPE2015, the spotlight is also on a broader and more complete extrusion product range – from

conventional RADILON® nylon engineering plastics to RADILON® XTreme, RADILON® D and RADILON® DT specialities, HERAFLEX® thermoplastic elastomers and HERAFORM® acetal copolymers.

Depending on their technical characteristics, the products are ideal for industrial, consumer goods and sports applications.

MAIN APPLICATIONS...

MONOFILAMENT

- Fishing nets, tennis rackets (RADILON® S PA6 and copolymers ensuring mechanical resistance and transparency)
- Toothbrushes, dental floss (RADILON® D PA6.10 and RADILON® DT PA6.12)
- Monofilament for press felts for paper machines (RADILON® D PA6.10)
- Fabric for industrial filtration (RADILON® D PA6.10)
- Sewing thread (RADILON® D PA6.10)
- Airbags (RADILON® A PA6.6)
- Tyre cord (RADILON® A PA6.6)
- Cleaning brushes for industrial ovens (RADILON® A PA6.6 and RADILON® XTREME high temperature resistant polyamides)
- Industrial filtration and hair brushes (RADILON® XTREME high temperature resistant polyamides)
- Seatbacks (HERAFLEX® thermoplastic elastomers)

FLEXIBLE PACKAGING FILM

The ideal products for packaging applications are:

- RADILON® S PA6 and RADILON® CS PA6/6.6 copolymers (easy to process, low permeability to gas such as oxygen and odours, excellent grease resistance, excellent mechanical properties and puncture resistance, good transparency)
- RADILON® A PA6.6 (for applications requiring high temperature resistance, such as sausage casing and the preparation and preservation of smoked foods)
- RADILON® D PA6.10 and RADILON® DT PA6.12 (featuring good mechanical resistance, high water vapour barrier, good oxygen and odour barrier under high humidity conditions, excellent transparency)

RODS

The ideal products for MACHINABLE PLASTIC RODS are:

 – RADILON® S PA6 and RADILON® A PA6.6 (main properties: good processability, resistance to fatigue and abrasion, thermal and electric insulation, rigidity, hardness and impact resistance)

HERAFORM® acetal copolymers

PROFILES

For the production of thermal insulation profiles and for railway applications, the ideal product line is:

– RADILON® A PA6.6

LAMINATES

For the production of laminate coverings, the ideal products are:

- RADILON® S PA6 and copolymers

For technical information on products Erico Spini, Marketing&Application Development Director of RadiciGroup Plastics e-mail: erico.spini@radicigroup.com Phone: +39 0346 22453

IN THE PLASTICS INDUSTRY, RadiciGroup is one of the most highly regarded manufacturers of polyamide and polyester engineering plastics for applications in many industries such as: AUTOMOTIVE – ELECTRICAL AND ELECTRONICS – TECHNICAL INDUSTRIAL – FURNISHINGS – CONSUMER GOODS – SPORT. With six plants strategically located in Italy, Brazil, the United States, Germany and China, RadiciGroup Plastics offers processing, quality control, research and development, and technological development support. A network of sales units – with a strong presence in Italy, Germany, France, Spain, Great Britain, the USA, Brazil, China and India – makes RadiciGroup Plastics a truly global organization, capable of meeting the needs of its customers worldwide on a timely basis. <u>WWW.RADICIGROUP.COM/PLASTICS</u>

RADICIGROUP – 3,200 employees. Production and sales sites in Europe, North America, South America and Asia.

Diversified businesses focusing on chemicals, plastics, synthetic fibres and nonwovens. 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 – FURNISHINGS – AUTOMOTIVE – CONSUMER GOODS – CONSTRUCTION – ELECTRICAL AND ELECTRONICS – HOUSEHOLD APPLIANCES – SPORT. RadiciGroup, with its Chemicals, Plastics, Synthetic Fibres and Nonwovens Business Areas, is part of a larger industrial group that also includes textile machinery and energy businesses.

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