

PRESS RELEASE

Bergamo, 09 April 2014

RadiciGroup at Chinaplas: Nylon specialities at centre stage.







Shanghai, 23-26 April 2014 – CHINAPLAS 2014, the 28th International Exhibition on Plastics and Rubber Industries opens at the New International Expo Center in Pudong. Among the exhibitors is RadiciGroup, represented by Radici Plastics (Suzhou) Co., Ltd, which is showcasing its nylon specialities.

The spotlight is on: RADILON® nylon specialities with enhanced heat resistance - the HHR (High Heat Resistant) and new RADILON® XTreme lines; RADISTRONG® PA6 and PA6.6 long-fibre plastic specialities, ideal for use as metal replacements; and the RADILON® DT PA6.12 and RADILON® D PA6.10 long-fibre polyamide families.

RADICIGROUP PRESS CONFERENCE: The press conference is on Thursday, 24 April, at 11:00 AM at stand N1 M51. Erico Spini, marketing and application development director of the RadiciGroup Plastics Business Area, is giving a presentation on: "Polyamide specialities for the automotive and electrical&electronics industries."

On 23 April, <u>CHINAPLAS 2014</u>, the 28th International Exhibition on Plastics and Rubber Industries, opens in Shanghai. Last year, the international trade show was attended by 114,000 visitors from 138 countries. At this year's event, RadiciGroup Plastics, represented by **Radici Plastics (Suzhou) Co., Ltd.**, is showcasing its range of engineering plastics, with an emphasis on specialities. The Group's local production site in Suzhou

was created in 2006 and, since then, has been providing both local and global customers with efficient, high quality before- and after-sales service, as well as flexible and reliable logistics service.

"Over the years our production site in China has grown and changed in order to keep up with the market."



said Edi Degasperi, CEO of Radici Plastics (Suzhou) Co., Ltd. "We have expanded our product range, invested in R&D and technical support for our Asian customers, and increased our production capacity. We have grown at quite a fast rate on the Chinese market, which has allowed us not only to strengthen our presence in both the electrical/electronics and industrial sectors, but also, and most importantly, to develop yet another application market, the automotive industry. Thanks to our numerous OEM approvals, from GM, FORD, VW, AUDI, FIAT-CHRYSLER and others, we have many new projects in the works, while many others have already reached the mass production stage. In response to the volume growth we have experienced, we plan to install a new extrusion line by the end of the year to increase our production capacity by about 5,000 tons/year."

"As of today, Radici Plastics Suzhou has the capability to produce and supply the local market with a wide range of products, from engineering plastics to nylon and PBT, thermoplastic elastomers and acetal copolymers," Mr. Degasperi continued. "Following the recent installation of sophisticated additive delivery systems on our extrusion line, our product range also includes nylon specialities, such as Radilon® HHR and Radilon® Xtreme, which are being showcased at CHINAPLAS."



At this year's event, the spotlight is on some of the latest nylon specialities developed by RadiciGroup for applications in the automotive and electrical/electronics industries.

RADILON® HHR AND NEW RADILON® XTREME LINES.

RadiciGroup nylon high-heat-resistant specialities with enhanced performance: the new RADILON® XTreme line has joined the RADILON® HHR line. These RadiciGroup high-temperature-resistant specialities are

ELECTRIC ENGINE COMPONENTS RADILON®A RV350 HHR 3800 NERO

> PA6.6, superior heat ageing resistance, insulation class H (180°).

taking centre stage at Chinaplas 2014. Radilon® HHR nylon 6.6 engineering plastics feature excellent highheat 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.

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. The base nylon polymer used to produce these innovative engineering plastics at the RadiciGroup Plastics production sites was developed and produced by Radici Chimica SpA, a RadiciGroup polymerization plant in Novara, Italy. This vertically integrated polyamide production capability is a distinctive feature of RadiciGroup. RADILON® XTreme engineering plastics are mainly used in automotive applications (turbo air ducts, EGR head exchanger components and resonators) and electrical applications (high-temperature electrical insulation components and lead-free soldering components).

Key Radilon® XTreme 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°C compared to PA6.6)
- Viscosity grades suitable for injection and blow moulding

RADISTRONG®: LONG-FIBRE PA6 AND PA6.6 SPECIALITIES.

Radistrong® specialities are available in nylon 6 and 6.6 versions and, due to their characteristics, 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 Radistrong® advantages over traditional polyamides:

- Higher impact strength
- Improved creep and fatigue resistance
- Greater mechanical resistance and stiffness at high temperatures

RADILON® DT: LONG-FIBRE NYLON 6.12 POLYMERS

AND

RADILON® D: NYLON 6.10 ENGINEERING POLYMERS

Radilon® DT PA6.12 polymers are materials with exceptional chemical resistance, even to salts such as zinc chloride and calcium chloride. These RadiciGroup products feature high impact strength, good heat-ageing resistance and excellent chemical resistance.

Radilon® DT also ensure:

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

RADILON® DT PA6.12 polymers are ideal for applications in the automotive and industrial sectors.



Together with the nylon 6.12 specialities, the RadiciGroup Plastics product portfolio includes the **Radilon® D** line of nylon 6.10 engineering plastics. 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 traditional 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
- Improved glycol resistance



Radilon® Ds are ideal for <u>applications</u> in the automotive sector:



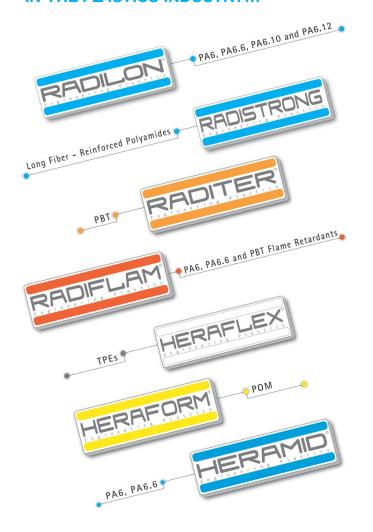
- Fuel lines
- Fuel line connectors
- > Pneumatic conduit
- Brake conduit
- Under-the-bonnet components

For more information on RadiciGroup specialities...

Contact: info.plastics@radicigroup.com

Go to our dedicated WEB Page!

IN THE PLASTICS INDUSTRY...



RadiciGroup is one of the most highly regarded manufacturers of polyamide engineering plastics.

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.

WWW.RADICIGROUP.COM/PLASTICS

RADICIGROUP: FROM CHEMICALS TO PLASTICS AND SYNTHETIC FIBRES.

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. www.radicigroup.com











新闻稿

贝加莫, 2014.04.09

兰蒂奇于橡塑展: 特种尼龙闪耀登场



欢迎莅临我司展台 展位号: N1 M51



RADIFLAM BADICIGROUP
CHEMICALS 250 CONSUME GOODS SUSTAINABILITY SEVALUE ADDED PRODUCTS APPLIANCES RADICIGROUP RADIPOL®

POLYAMIDES RADICOR SUSTAINABILITY SEVALUE ADDED PRODUCTS APPLIANCES RADICIONE RADIPOL®

VALUE ADDED PRODUCTS APPLIANCES RADICIGNOUP RADIPOL® RADIPOL® UPSTREAM INTEGRATION INDUSTRIAL

PRESS CONFERENCE

上海,2014.04.23-26 –2014 CHINAPLAS, 第 28 届中国国际塑料橡胶工业展览会即将在浦东新国际博览中心隆重开幕。 兰蒂奇工程塑料(苏州)有限公司将代表兰蒂奇集团参加本次展会,展示其特种尼龙产品。

重点包括: RADILON®耐高温尼龙系列-"HHR"型号 (High Heat Resistant 耐高温) 以及新推出的 RADILON® XTreme 系列; RADISTRONG® PA6 和 PA6.6 长玻纤增强尼龙-金属材料的理想替代物; 以及 RADILON® DT PA6.12 和 RADILON® D PA6.10 长玻纤增强聚酰胺系列。

<u>兰蒂奇集团新闻发布会</u>. Erico Spini --- 兰蒂奇集团工程塑料业务 市场及应用开发总监,将会在展会期间做一次关于"特种尼龙 在汽车、电子/电气行业的应用"的公开演讲。

时间: 2014.04.24 星期四 上午 11 点

地点: 兰蒂奇展台 展位号 N1M51

4月23日, CHINAPLAS2014-第28届中国国际橡塑工业展,即将在上海开幕。去年,该国际性展会吸引了来自138个国家的11,4000名观众前往观展。今年,兰蒂奇工程塑料(苏州)有限公司将代表兰蒂奇集团参加

此次展会,展示其一系列的工程塑料产品并着重推广该系列产品的特殊性能。**2006**年,兰蒂奇集团在中国建厂, 选址苏州,开始为国内外客户提供高效、高质量的售前售后服务以及灵活稳定的物流服务。



"过去几年里,兰蒂奇中国工厂逐步发展壮大,同时我们也在做适当调整以顺应市场的需求,"兰蒂奇工程塑料(苏州)有限公司总裁 Edi Degasperi 说道。"我们扩大了产品范围,为亚洲地区的客户增加了研发及技术支持方面的投资,并且扩大了生产力。我们在中国的市场占有率迅速提升,这不仅仅使我们稳固了在电子/电气及工业品行业的地位,最重要的是,我们开发了另一个应用市场,汽车行业!感谢通用,福特,大众,奥迪,菲亚特-克莱斯勒以及其他主机厂的认证许可,我们获得了许多新项目的开发。当然,也有很多项目已经处于量产阶段。跟以往一样,为了应对销量迅速增长的情况,我们预计今年年底再增加一台挤出机,这样我们的年产量将达到5000吨。"

"如今,兰蒂奇工程塑料苏州工厂能够为国内市场提供大范围的 产品种类,从工程塑料到尼龙,PBT,热塑性弹性体以及聚甲醛等"

Degasperi 先生继续说道,"近期我们在挤出产线上增加了精密的添加剂喂料系统,因此以后我们的产品范围又会包括特种尼龙,比如 RADILON® HHR 耐高温尼龙及 RADILON® XTreme 系列产品。这些你们都将在橡塑展上看到。"



今年我们主推的产品是一些由兰蒂奇集团开发的应用于汽车,电子/电气行业的特种尼龙。

RADILON® HHR 和新型 RADILON® XTREME 系列.

兰蒂奇集团增强型耐高温阻燃特种尼龙:新型 RADILON® XTreme 系列已加入 RADILON® HHR 行列。兰蒂奇的这些耐高温特种尼龙将成为 2014 橡塑展上的焦点。RADILON® HHR 尼龙 66 工程塑料具有很强的耐高温特性,耐高温最高可达到 210℃。并且适合注塑和吹塑两种加工方式。目前该型号可供应含 15%, 20%和 35%

玻纤的产品。 而且,此款材料安全系数很高,因而可以作为金属材料或者特种聚合物(PPS, PPA, PA46) 的替代材料。

电机组件 RADILON®A RV350 HHR 3800 NERO PA6.6, 优异的耐热老化性能, 绝缘等级 H (180°).

近期为 HHR 产线新增加的 RADILON® XTreme 特种产 线提高了这类产品的温度范围。RADILON® XTreme 材料是由 兰蒂奇工程塑料与兰蒂奇化工两大业务部门进行广泛合作,专

门为那些与热空气接触的应用所开发,其长期工作温度最高可达 230°C。兰蒂奇工程塑料工厂所生产的新型工程塑料所使用的尼龙聚合物基料都是由意大利兰蒂奇化工公司研发和生产的。兰蒂奇化工是兰蒂奇旗下的一家位于意大利诺瓦拉的专业做聚合生产的公司。这种垂直整合聚酰胺的生产力的方式是兰蒂奇集团的独有的特色。RADILON® XTreme 工程塑料主要应用于汽车行业 (涡轮风管, EGR 热交换组件及谐振器) 和电子行业 (耐高温电气绝缘组件 和无铅焊接组件)。

Radilon® XTreme 的主要特性:

- 熔点, 280°C (+ 20°C 对比 PA6.6)
- 玻璃化转变温度, 90°C (+ 20°C 对比 PA6.6)
- 饱和吸水率, 7% (- 25°C 对比 PA6.6)
- 不同粘度等级适合注塑及吹塑工艺

RADISTRONG®: 特种长玻纤 PA6 和 PA6.6

Radistrong® 特种材料基于尼龙 6 和尼龙 66 基础上改性,具备理想的机械性能,在一些关键应用上用于替代金属材料,这种情况下传统的工程塑料是无法达到要求的。

新型长玻纤特种 Radistrong® 型号的产品是通过挤出成型的方式生产而来。该型号目前可供应含 20%-60%的 玻纤或碳纤填充。应用范围包括汽车行业和家电行业。



RADISTRONG® A LGF50W 339 BK 7234 PA66+ 50%长玻纤增强, 更高的机械强度和抗冲强度, 热稳定性.

与传统尼龙相比, Radistrong® 的主要优势:

- 更高的冲击强度
- 耐蠕变和耐疲劳
- 高温下具备更优异的机械强度及刚性

和

Radilon® DT PA6.12 聚合物 是具有更高耐化学性的材料,耐氯化锌及氯化钙. 这些兰蒂奇集团产品具有高抗冲,耐热老化及优异的耐化学腐蚀性能。

Radilon® DT 具有:

- 良好的抗水解性
- 即使在套管接触区域也具备优异的耐应力开裂性能
- 由于吸水率低,尺寸稳定性好

RADILON® DT 系列产品是汽车部件及工业用品的理想原料



除了特种尼龙 PA6.12, 兰蒂奇 Radilon® D产品组合里还包括工程塑料尼龙 6.10. 适用于注塑及挤出成型,这些材料中有 64%来自于生物材料癸二酸。

癸二酸是从蓖麻种子中提取,其主要生长于印度和中国的半干旱地区,因此与农作物不存在竞争, Radilon® D 材料具备优异的性能,而且确保较高的可持续性发展。兰蒂奇 PA6.10 减少了产品对环境的影响, 然而材料性能却超过了传统聚酰胺,或者基本相当.

相比 PA6 和 PA6.6, Radilon® D 聚酰胺:

- 减少吸水
- 在湿态条件下, 拉伸强度和拉伸模量损失较小
- 更好的耐氯化锌和氯化钙性能
- 改善了耐乙二醇性能



燃油蒸汽管

RADILON®D 40EP25ZW BLUE 半柔性 PA6.10, 优异的耐化学腐蚀性, 热稳定性, 较高燃油阻隔性.

Radilon® D 系列产品适用于以下汽车部件应用:



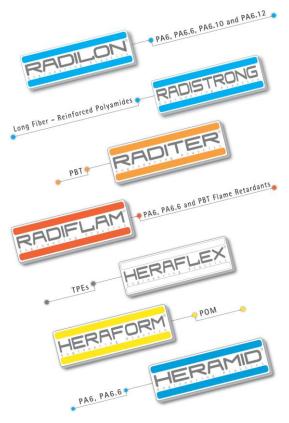
- ▶ 燃油管道
- ▶ 燃油管路连接器
- > 气动管道
- ▶ 制动管
- ▶ 发动机罩内部件

更多兰蒂奇特种材料信息请咨询:

邮箱: info.plastics@radicigroup.com

前往我司 官网!

在塑料行业……



兰蒂奇集团是全球最受关注的聚酰胺工程塑料的 生产商之一。

在意大利,巴西,美国,德国和中国拥有 6 处战略性生产基地以进行生产加工,质量管理,产品研发及技术支持等工作。

广泛的销售网络 -分布于意大利,德国,法国,西班牙,英国,美国,巴西,中国和印度-使得兰蒂奇集团真正成为一个国际性企业,及时为全球客户提供服务。

WWW.RADICIGROUP.COM/PLASTICS

兰蒂奇集团: 从化工品到工程塑料到合成维

生产及销售基地分布于欧洲, 北美洲, 南美洲及亚洲, 业

务范围包括从化工品,工程塑料到合成纤维和无纺布。战略性地垂直整合了聚酰胺的生产加工工艺。质量管控,持久创新,诚信经营的公司管理理念---这就是兰蒂奇集团,尼龙化学材料的领导者。

兰蒂奇集团的产品主要应用于:

- 服装
- ■家具
- | 汽车
- ■消费品
- 建筑
- ■电子、电气
- ■家电
- 体育运动用品

兰蒂奇集团,除了化工,工程塑料,合成纤维和无纺布行业的业务,同样也是一个更大的工业行业的一员,其业务范围还包括:纺织机械和能源应用。详见 www.radicigroup.com

兰蒂奇集团新闻办公室

Cristina Bergamini 集团市场公关部 cristina.bergamini@radicigroup.com







