# RADICIGROUP FOR SUSTAINABILITY REPORT

KEY ELEMENTS 2015 English



### Vision, Mission, Values and end applications of the products of RadiciGroup



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#### VISION

To be one of the leading chemical groups in the polyamide, synthetic fibres and engineering plastics production chain.

#### **MISSION**

To promote the development of our businesses while pursuing our Group values and culture. To pursue our vision by valorising and optimizing our resources, establishing strategic alliances and searching for new markets, including niche markets. To embed sustainability into new product and application development.

#### **VALUES**

Putting people at the centre of everything we do, respecting their right to physical and cultural integrity. Efficiency and effectiveness of our management systems to improve our business. Fairness and transparency of our management systems to comply with all applicable laws and regulations. Attention to the needs and expectations of our stakeholders in order to create a feeling of belonging and satisfaction. Reliability of our management and operating systems to ensure the safety of our employees, our community and the environment. Our responsibility as a company for our workers, production sites and communities.

#### **IN 2015**

**Radici Partecipazioni SpA** SpA was awarded **UNI EN ISO 9001:2015** certification for its quality control system.

#### **APPLICATIONS**

#### PRODUCTS FOR THE HOME SECTOR



Yarns for curtains, upholstery, carpets and wall-to-wall carpets. Engineering plastics for household appliances and the electrical/electronic sector. Nonwovens for roofing, filtration, furnishings and disposable table tops.

#### PRODUCTS FOR APPAREL



Yarns for clothing, lingerie, beachwear and sportswear. Nonwovens for protective disposable clothing.

#### PRODUCTS FOR THE AUTOMOTIVE SECTOR



Engineering plastics for car interiors and engine components. Yarns for car interiors and airbags. Nonwovens for headliners, seatings and airbag covers.

#### PRODUCTS FOR THE INDUSTRIAL SECTOR



Yarns and engineering plastics for special applications in the industrial sector.

#### PRODUCTS FOR THE SPORTS SECTOR



Yarns for sportswear.

Yarns for sports fields, recreational and domestic indoor and outdoor applications.

# RadiciGroup for Sustainability Report - Key elements RadiciGroup stakeholder engagement



**CHAPTER 2** 



#### **SHAREHOLDERS**

Strategic plans





#### **TRADE UNION REPRESENTATIVES**

Focus on and development of shared projects



#### **COMPETITORS**

Work to safeguard sectors of reference in trade associations



#### **LOCAL COMMUNITIES**

Dialogue and support for the various activities



#### **SUPPLIERS**

Work for a sustainable supply chain, code of conduct



#### **MEDIA**

Timely and constant information and dialogue



#### **CUSTOMERS**

Work for a sustainable supply chain, code of conduct, CRM and **Customer Satisfaction Survey** 



#### **BANKING INSTITUTIONS**

Dialogue and information sharing



#### TRADE ASSOCIATIONS

Research and development, market opportunity research



#### **EMPLOYEES**

Communication and dialogue, ad hoc initiatives, creation of tangible and intangible value



#### SCHOOLS AND ACADEMIC WORLD

Dialogue, alternating school and work, student orientation

# Holding company certification according to the ISO 9001:2015 standard

**PROCUREMENT** 

& LOGISTICS



CHAPTER 3 FINANCE AND CONTROL **BUSINESS PLANNING HUMAN RESOURCE MARKETING & RESEARCH & ADMINISTRATION** AND DEVELOPMENT **MANAGEMENT** COMMUNICATION **DEVELOPMENT** ISO 9001:2015 Punto di riferimento per la holding e tutte le consociate per una qualità sostenibile. 

**SPECIALTY CHEMICALS** 

**GROUP ORGANISATION** 

& PROGRAMME

**MANAGEMENT** 

**PERFORMANCE PLASTICS** 

**INFORMATION &** 

**COMMUNICATION** 

**TECHNOLOGY** 

**SYNTHETIC FIBRES & NONWOVENS** 

MANAGEMENT AND

**COORDINATION FOR** 

SUSTAINABLE DEVELOPMENT

**QUALITY CONTROL** 

**AND PROCESS** 

**MANAGEMENT** 

# RadiciGroup for Sustainability Report - Key elements Working for a sustainable supply chain



CHAPTER 4 **RADICIGROUP SUPPLIERS CUSTOMERS** Supplier evaluation based on sustainable criteria **Business** integrity Transparency and lawfulness of business conduct Care and protection of working conditions Zero tolerance of all forms of abuse Effective complaints management Product and process safety Product and process safety Commitment to the continued reduction in the social Commitment to the continued reduction in the social and environmental impact of products and environmental impact of products

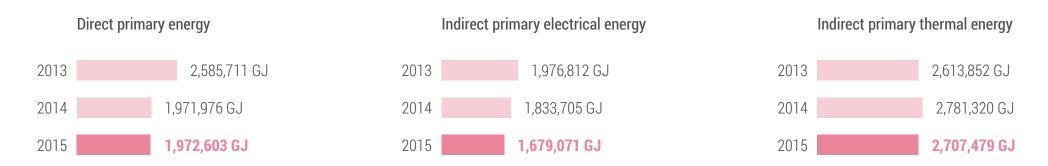
### The environmental performance of RadiciGroup



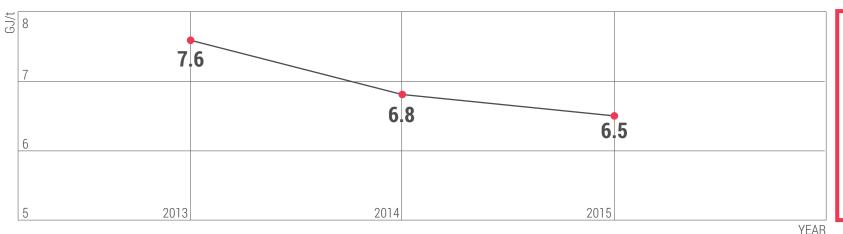
CHAPTER 5

#### CONSUMPTION OF DIRECT + INDIRECT PRIMARY FOSSIL SOURCE ENERGY

[G4-EN3 INDICATOR]



#### TOTAL CONSUMPTION OF FOSSIL SOURCE PRIMARY ENERGY IN RELATION TO PRODUCT QUANTITIES [G4-EN3 INDICATOR]



3-YEAR PERIOD 2013-2015 TOTAL CONSUMPTION OF PRIMARY ENERGY The Group's environmental impact is reduced thanks to a reduction in consumption of

fossil source primary energy.

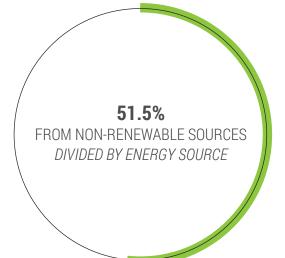
### RadiciGroup for Sustainability Report - Key elements The environmental performance of RadiciGroup



CHAPTER 5

#### **ELECTRICAL ENERGY MIX 2015**

[G4-EN3 INDICATOR]





27.4% from Natural Gas



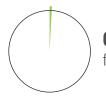
13.7% from Coal



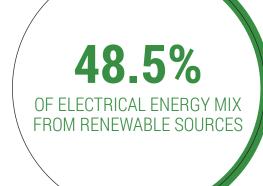
from Nuclear



2.1% from Other (other fossil fuels)



0.9% from Fuel Oil



of which companies with 100% renewable energy:

Radici Novacips - Villa d'Ogna, Italy

Radici Novacips - Chignolo, Italy

Radici Plastics - Brazil

Radici Plastics - Germany

Radici Yarn - Ardesio, Italy

Radici Fibras - Brazil

Radici Partecipazioni - Gandino, Italy

3-YEAR PERIOD 2013-2015

+4.2%

RENEWABLE ENERGY

### The environmental performance of RadiciGroup



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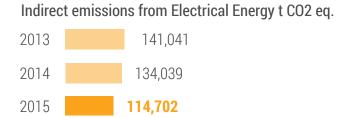
**CHAPTER 5** 

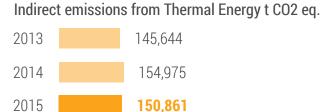
CHAPTER 6

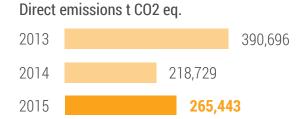
CHAPTER 7

#### TOTAL DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS

[G4-EN15 + G4-EN 16 INDICATOR]







# INDEX OF TOTAL DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS IN RELATION TO PRODUCT QUANTITIES



# QUALITY OF EMISSIONS

[G4-EN21 INDICATOR]

EN21		2013	2014	2015
t	TOTLE	459	240	181
t	NOx	312	207	152
t	SOx	0	0	0
t	POP	0	0	0
t	VOC	11	12	9
t	HAP	109	0	0
t	STACK & FUGITIVE	0	0	0
t	PM	9	5	8
t	OTHER ATMOSPHERIC EMISSIONS	18	16	12

3-YEAR PERIOD 2013-2015

-21.6%
TOTAL GREENHOUSE GAS EMISSIONS

3-YEAR PERIOD 2013-2015

-60.5% POLLUTANTS

### The environmental performance of RadiciGroup



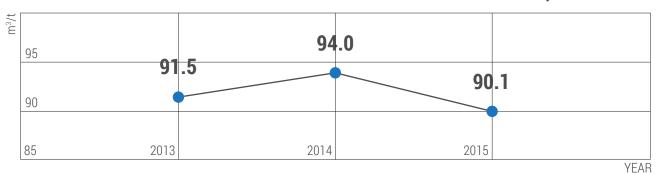
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#### WATER RESOURCES PER SOURCE (m3)

[G4-EN8 INDICATOR]



#### INDEX OF THE USE OF WATER RESOURCES IN RELATION TO PRODUCT QUANTITIES



#### **QUALITY OF WASTE WATER** [G4-EN22 INDICATOR]

EN22	QUALITY OF WASTE WATER	2013	2014	2015
kg	COD [kg O2/year]	1,533,321	1,185,152	694,055
kg	Total Nitrogen [kg N/year]	995,990	1,096,000	780,132
kg	Suspended Solids [kg/year]	23,823	17,169	23,474
kg	Metals * *aluminium, chrome, iron, nickel, copper, vanadium, zinc	7,931	9,648	3,486

#### 3-YEAR PERIOD 2013-2015

90%

OF WATER USED IS INTENDED FOR COOLING

STABLE CONSUMPTION AND WATER RECYCLING IN EVERY COMPANY

#### **3-YEAR PERIOD 2013-2015**

CONTINUOUS
IMPROVEMENT IN QUALITY
OF WASTE WATER

### The people of RadiciGroup



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#### **STAFF TRAINING**

[G4-LA 9 INDICATOR]



### **Product sustainability**



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#### **OUR PRODUCTS WITH REDUCED ENVIRONMENTAL IMPACT**

# MANUFACTURED USING BIOPOLYMERS OBTAINED FROM RENEWABLE SOURCE MATERIALS



Radilon® D: PA6.10-based engineering plastics Radilon® 6.10: PA6.10-based textile yarns

dorix® 6.10: PA6.10-based staple fibre

Radilon® PX: bio-based engineering plastics and

textile yarns

dorix® PX: bio-based staple fibre Radifloor® PX: bio-based BCF yarn

CornLeaf®: Ingeo™ polylactic acid (PLA) yarn

#### **SOLUTION-DYED SAVING WATER AND ENERGY**



Radifloor®: PA6 BCF yarn

dorix®: PA6 staple

Radilon® staple fibre: PA6 staple Radilon®: PA6 and PA6.6 textile yarn

Radyarn®/Starlight®: polyester textile yarn r-Radyarn®/r-Starlight®: recycled polyester

textile yarn

#### MANUFACTURED USING CLEAN ENERGY



Radipol®: PA6, PA6.6 e PA6.10 polymers

Radilon®: PA6 e PA6.6 engineering plastics

Heramid®: PA6 and PA6.6 engineering plastics

Radifloor®: PA6 and PA6.6 BCF yarn Radigreen®: PA artificial grass yarn Radilon® staple fibre®: PA6 staple Radilon®: PA6 and PA6.6 textile yarn

#### MANUFACTURED USING RECYCLED RAW MATERIALS



Heramid®: PA6 and PA6.6 engineering plastics

r-Starlight®: polyester textile yarn r-Radyarn®: polyester textile yarn