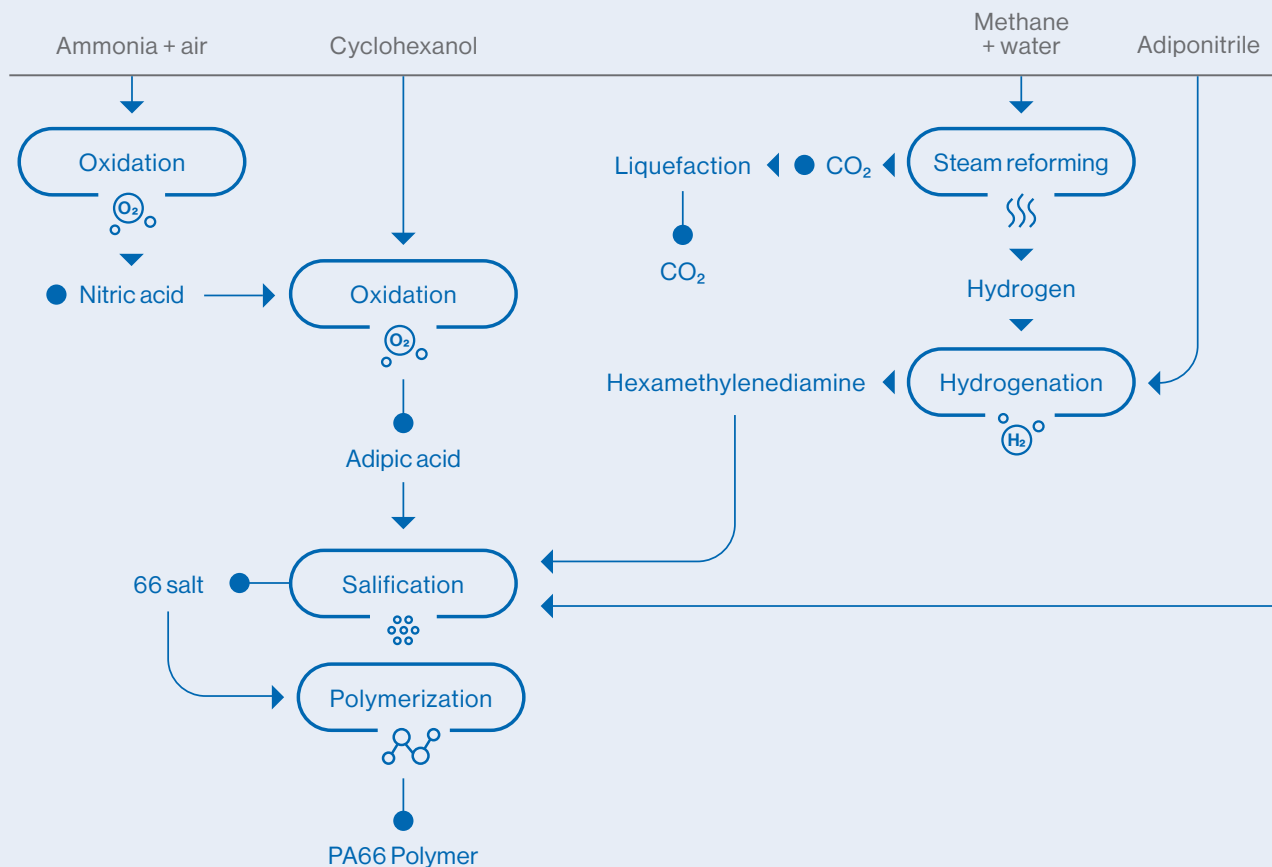




Experience and reliability
inside chemistry

Your global partner for specialty chemicals.

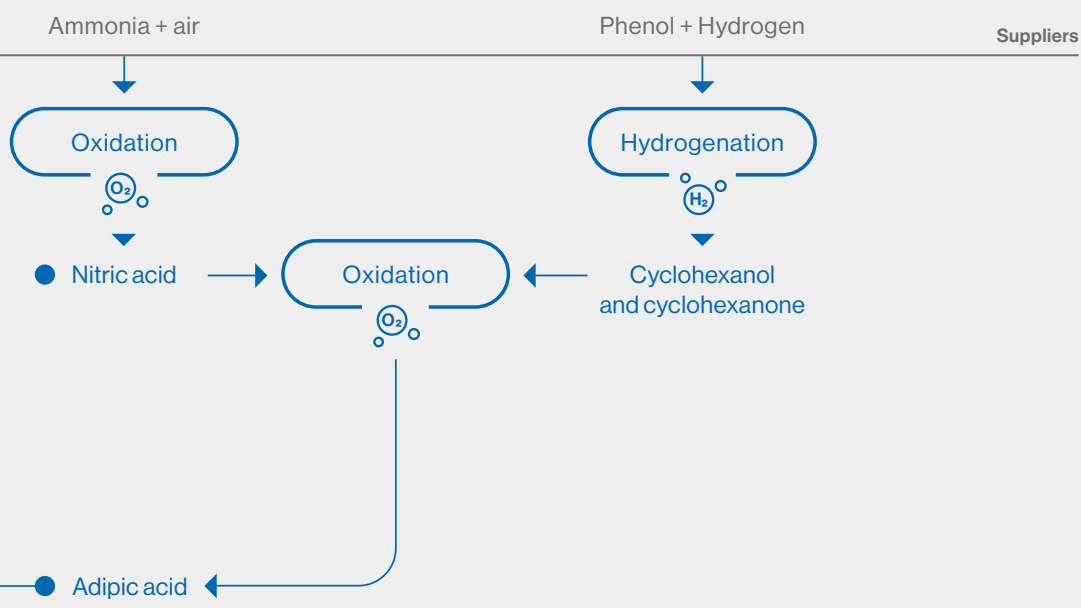
Novara



The core of the RadiciGroup Specialty Chemicals Business Area has always been the **historic production site of Radici Chimica Novara** (Italy), a brilliant example of **vertically integrated PA66, PA610 and special polymers** production, starting with monomers, **adipic acid**, hexamethylenediamine, and the chemicals needed to obtain them, mainly nitric acid and hydrogen.

What makes us special

- Extensive polymer know-how
- Global presence
- Family-run business
- Guarantee of business continuity
- Green Chemistry
- Innovation



The **Radici Chimica Deutschland plant of Zeitz** (Germany) is a **modern chemical factory** with technologically advanced systems for the production of **adipic acid**. At the Zeitz site, production starts further upstream, not only with nitric acid but also with the raw materials needed for adipic acid production, namely KA oil, a cyclohexanol / cyclohexanone mixture.

The **Radici Chem Shanghai Sales office is strategically located near customers** to be able to offer the market the quickest and most reactive service.

What we can count on

- Two among the most advanced European chemical plants
- Energy and steam from a High-Efficiency Cogeneration plant in Novara
- An internal railway siding in both production sites, connected to the public railway nets, for a low emission logistics system

Main products and applications

radiplus®

Adipic acid for the production of fibres and PA66 engineering polymers.

Product	Main direct applications	Main final applications
Adipic Acid	Polyamides	Textile and industrial applications. Engineering plastics for Electrical/Electronic components and automotive components for conventional and e-mobility.
	Polyurethanes	Foams, elastomers, shoe soles.
	Polyesters	Plasticizers, lubricants, adhesives. Textile and industrial applications.
	Additives	Additives for the food industry.

radichem®

Hexamethylenediamine (intermediates for polyamides and coatings), Nitric Acid, KA Oil, Esters.

Product	Main direct applications	Main final applications
Hexamethylenediamine	Polyamides	Textile and industrial applications. Engineering plastics for Electrical/Electronic components and automotive components for conventional and e-mobility.
	Isocyanates	Coatings for the automotive industry and other sectors.
Nitric Acid	Additives	Additives for metallurgy, steel production, zinc and chromium plating. Goldsmith industry.
	Nitration	Cleaning and disinfecting equipment for the dairy industry. Nitrogen fertilizers, herbicides, insecticides.
Esters	Solvents	Biodegradable solvents and paint removers.
	Detergents	Detergents/Cleaning substances.
	Plasticizers	Polymer extrusion or injection moulding.

radimix®

AGS (intermediates for polyesters and solvents).

Product	Main direct applications	Main final applications
AGS	Polyesters	Shoes and industrial applications.
	Solvents	Detergents/Cleaning substances.

radipol®

PA66 polymers and PA6/PA66 copolymers. PA510, long-chain PA610 (bio-polymer), PA612 and other special polyamides.

Product	Main typology	Main final applications
PA66 polymers, special polyamides PA510, PA610, PA612, PA6/PA66 copolymers	Compounds/ Engineering plastics	Automotive Industry. Sportswear and leisurewear. Electrical/Electronic components. Household appliances.
	Fibres	Fashionwear, sportswear and leisurewear. Automotive applications.

Why choose our products

RadiciGroup Specialty Chemicals is the first and main supplier of RadiciGroup companies.

Its products serve as raw materials for further processing of high performance polymers and advanced textile solutions.

Adipic acid and other chemicals

- Outstanding knowledge of **markets needs** and **dynamics**.
- Excellent **adipic acid quality** and top purity.
- **Low-emission** production monitored transparently by the EU ETS system.
- Double production plant able to grant:
 - **supply continuity**;
 - **packaging and logistics** as per customer's request.

PA66

- The **widest product portfolio** ranging from **textile polymers** to **technopolymers** and **co-polymers**.
- **Excellent quality** both for low and high viscosity polymers.
- Continuous **investment in BATs**.
- High **plant flexibility**.

Special polyamides, unique performances.

The expertise of RadiciGroup allows its production plants to master the polyamide production process from polymer chemicals to synthetic fibres and engineering plastics, both for standard and for special polyamides.

PA610

63% bio-based long-chain polyamides:
crystalline polymer, low water absorption, low density, high resistance to chemical substances, wide range of process conditions: injection molding, extrusion of tubes, monofilaments, fibres.

PA612

High resistance PA with low humidity absorption, for compounding, injection moulding, monofilaments, industrial yarn and textile fibres.

PA510

100% bio-based polymer: low melting point, good mechanical properties similar to PA610 and PA612, low moisture absorption similar to PA610, good processability and flowability.

High Temperature PA

PA66-based polyamide with high melting point: 280°C, PA66 based polymer with high Glass Transition Temperature (80-85°C), low moisture absorption at saturation (7%), controlled rheology (grades developed for injection molding and extrusion).

Chemistry and Innovation for Sustainability

RadiciGroup Specialty Chemicals is a forerunner as for sustainability with its long-standing commitment to the environment through:

Decarbonization

setting concrete environmental sustainability objectives for abating direct greenhouse gas emissions through BATs and actively participating in the EU ETS system.

Renewable and light energy sources

leveraging investments and state-of-the-art technology along with taking advantage of a High-Efficiency Cogeneration plant.

Water preservation

devoting special attention to this resource which is reused and recirculated a number of times before being released back into the environment under controlled conditions.

Green chemistry

resulting in low and measured impact products, designed for the least possible hazardousness, along with bio-based solutions which come from constant R&D activities.

Responsible logistics

optimizing goods handling and providing better services to customers in terms of greater delivery reliability.

ESG commitment

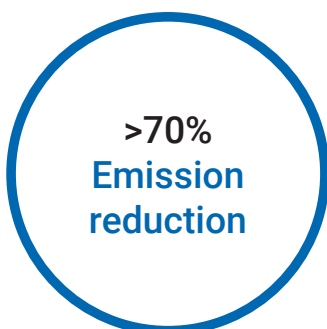
Radici Chimica Deutschland also joined Eco Vadis, an international rating platform for sustainability, qualifying for customers and the market as attentive to ethics, the environment and human rights.

RadiciGroup Specialty Chemicals sustainability efforts are part of a broader strategy that RadiciGroup is pursuing in the Environmental Social and Governance areas.

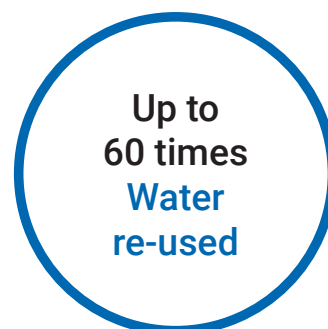
Here are some significant results achieved by the Group in its path towards sustainable development.



GRI, third-party certified **Sustainability Report** covering all RadiciGroup companies worldwide.



Since 2011, in RadiciGroup plants, up to present.



Water re-used in RadiciGroup production plants.

Life Cycle Assessment (LCA) studies. Measuring Sustainability.

RadiciGroup Specialty Chemicals can count on a team of experts for calculating internally the Life Cycle Assessment (LCA) of its products. LCA is an internationally recognized scientific methodology that evaluates the environmental footprint of a product along its entire life cycle, returning the environmental impact values associated with each life cycle stage.

LCA allows to identify the hotspots in the process to improve environmental performance of products and helps in marketing and communication. Indeed, LCA results can be shared with customers upon request in order to let them understand the impact of the products they buy and to make them able to use the data to perform their own LCAs.

Quality, Safety, Efficiency. All certified.

Voluntary management systems, implemented according to the most advanced and recognised international standards, make up a framework of best practices and valuable tools for sustainable management.

RadiciGroup Specialty Chemicals maintains a range of certifications covering a number of subjects from quality to safety, from environment to energy.

Business Area Specialty Chemicals	ISO 9001:2015	ISO 14001:2015	ISO 45001:2018	ISO 50001:2018
Radici Chimica Novara SpA	✓	✓	✓	✓
Radici Chimica Deutschland GmbH	✓	✓	✓	✓



RadiciGroup. Inside your world.

RadiciGroup is one of the world's leading producers of a wide range of chemical intermediates, polyamide polymers, high performance engineering polymers and advanced textile solutions, including nylon yarn, polyester yarn, yarn made from recovered and bio-source materials, nonwovens and personal protective equipment for the healthcare field. These products are the result of the Group's outstanding chemical expertise and vertically integrated polyamide production chain and have been developed for use in a variety of industrial sectors, such as: automotive, electrical and electronics, household appliances, consumer and industrial goods, apparel, furnishings, construction, sports. The basis of the Group's strategy is a strong focus on innovation, quality, customer satisfaction and social and environmental sustainability.



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