Covestro

To make the world a brighter place with safe and sustainable innovations
Covestro – leading in the world of plastics

Strong
• €15.9 bn in sales
• ~17,900 employees\(^1\)

Global
• 50 production sites globally
• Close to customers and partners

Useful
• Plastics, pre-products and solutions
• For many industries

Innovative
• ~1,500 employees in research and development
• 80 years of ideas and inventions

\(^1\)calculated as full-time equivalent (FTE)

Information is based on financial results for 2021, except amount of employees and amount of global production sites. Those are as of June 30, 2021.
Our vision – promote circular economy

Circular economy enables a climate neutral future

- Circular economy is the key to resource conservation, climate and environmental protection
- Plastics are a driving force for implementing circular economy

We want to become fully circular

- We want to contribute to make circular economy the global guiding principle …
- … and anchor it across the whole company
The EU Green Deal: “The European Fix”

“We propose a green and inclusive transition to help improve people’s well-being and secure a healthy planet for generations to come.”

Frans Timmermans, Executive Vice President of the European Commission

Climate change
Environmental pollution
Human health
‘The greatest threat to our planet is the belief that someone else will save it.’

Robert Charles Swan, OBE, FRGS (born 28 July 1956) 
the first person to walk to both Poles
Be prepared. How to benefit.
The next innovation wave in the coatings and adhesives industry

- Emission (e.g. GHG & VOCs) & pollution free production
- Expand low-emission technologies (WB, UV, Powder)
- Increase share of renewable raw materials (bio-based and recycled)
- Ingredient transparency & substituting chemicals of concern (starting proactively)
- Understand the life-cycle impact (LCA/EPD/CFP)
- Design for end-of-life
Radical change opens huge opportunities
Safe and sustainable dominates innovation

Deocery®: Biobased
Amulix®: biodegrability
Niaga®: circularity
Discovery® is a family of plant-based resins designed to deliver high-performance products across coatings and inks markets while treating our planet gently. It’s made from plant-based materials that are sustainably sourced.
**Decovery® resins deliver …**

Plant-power: Performance without compromising Health & Sustainability

---

**Performance**

Equal or better performance compared to fossil-based resins\(^1\)

**Health**

Using safer ingredients and containing very low VOCs.

**Sustainability**

Plant-based materials, reducing the carbon footprint, manufactured with renewable energy\(^2\)

---

**Transparency**

- Up to 52% verifiable (C14) **bio-based content**\(^3\)
- Up to 34% **reduced carbon footprint**\(^4\)
- Sustainably sourced materials (feedstock transparency, supplier audits)
- Product (Sustainability) Passport & value chain transparency projects with 3\(^{rd}\) parties

---

\(^1\) Compared to conventional water-based alternatives

\(^2\) Only resins manufactured in Europe at Waalwijk, NL site; Energy from three local windparks (provided by Eneco)

\(^3\) Depending on product grade; verified by Beta Analytic Inc. (Bio-based and Biogenic Carbon Testing Laboratory)

\(^4\) Based on Lifecycle assessment according to ISO-14040-14044, IPCC 2013 GWP 100a standard and the WBCSD chemical sector guidance
Nature would paint it with Discovery®
To enable farmers to continue protecting their crops without generating microplastics, we developed Amulix®: a biobased, biodegradable seed coating formulation.
Regulation rapidly evolving driving business needs.

Plastic waste decomposition

Intentionally added polymers in agricultural, personal care, and home care products

Under ECHA restriction by 2027
Recycling is not an option – biodegradability as solution

Microplastics from textiles

Single use plastic ban

~50% of microplastics come from agriculture
€1.4B addressable market size

~25% of microplastics comes from personal care
€0.6B addressable market size

Not yet regulated
Amulix - JV dedicated to starch-based polymer production for seed treatment

50% carbon footprint reduction compared to acrylic coatings

Not compromising performance and seed safety
Leveraging technologies developed for other markets

Applicable markets fertilizers and personal care.
Niaga® - Innovation venture owned by Covestro

Together with their partners, Niaga® designs everyday products with clean and infinite materials and reversible connections only.

Niaga® sets itself apart through material stewardship, transparency, and closing the materials loop.
Niaga® - Product design principles

Keep it simple
Clean and infinite materials only
Reversible connections
Niaga®’s focus: bulky waste items

**Carpet**
5.000.000.000 kg (5 million tonnes) per year globally

**Mattresses**
35.000.000 (35 million) per year in Europe

**Furniture**
10.000.000.000 kg (10 million tons) per year in Europe
The Niaga® solutions
Teaming up with ambitious, medium sized manufacturers in order to prove the concept

Product benefits
- Fully recyclable
- Clean and infinite materials
- Full ingredient transparency
Products “designed to use again” identified by the Niaga® Tag

The Niaga® tag enables transparency on clean and infinite materials used in redesigned products and shows how to keep products out of the trash to use materials again and again.
Niaga® Circularity platform

Niaga® tag to keep products out of the trash

Tag landing page to enable transparency and return

Product passport to provide transparency

Return page to return the product
Role at Covestro:
• Lead strategic marketing and Sustainability
• Member High Level Round Table EU Chemical Strategy for Sustainability

Background:
• Over 13 years of experience in strategic marketing, sustainable market transformation and purpose driven business development

Professional Education:
• MSc in Aerospace Engineering from Delft University of Technology

Passion:
• My passion is to develop business solutions that create positive impact on society, resulting in a fair, healthy and sustainable world.

Sjoerd.Dijkstra@Covestro.com