

High-tech materials

Break-through technology for a brighter place





Agenda

Chapter 1

Covestro At a glance

Chapter 2

Connecting Solutions for Affordable & Sustainable Homes



Agenda

Chapter 1

At a glance



To make the world a brighter place

At a glance

Covestro – who we are



**ONE OF THE
WORLD'S LEADING
POLYMER
PRODUCERS**

At a glance

Structure



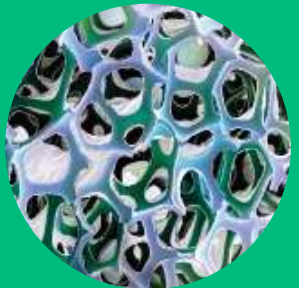
1

At a glance

Structure



Polyurethanes



Raw materials
for rigid and
flexible foams

At a glance

Structure

covestro

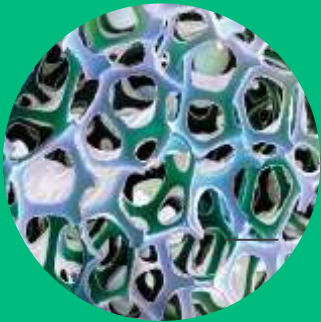
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At a glance

Structure

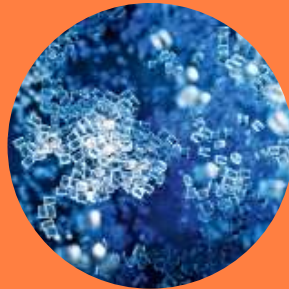


Polyurethanes



Raw materials
for rigid and
flexible foams

Polycarbonates



Granules and
sheets for a
wide variety of
applications

At a glance
Structure



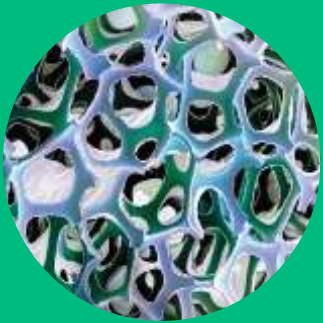
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At a glance

Structure

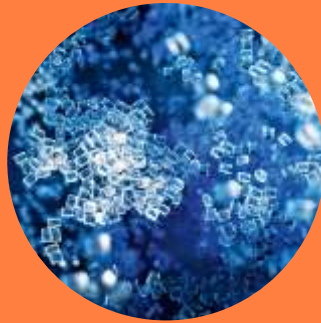
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Polyurethanes



Raw materials
for rigid and
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Polycarbonates



Granules and
sheets for a
wide variety of
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Coatings, adhesives & specialties



Raw materials
for coatings,
adhesives and
specialties

At a glance
Structure



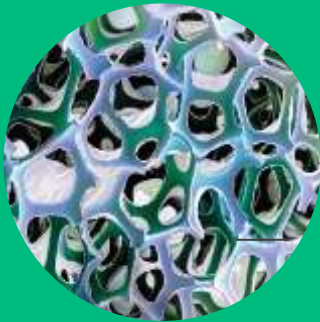
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At a glance

Structure

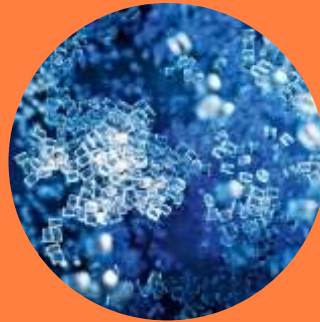


Polyurethanes



Raw materials for rigid and flexible foams

Polycarbonates



Granules and sheets for a wide variety of applications

Coatings, adhesives & specialties



Raw materials for coatings, adhesives and specialties



Basic Chemicals



Chlorine production as the backbone for product manufacture

At a glance

Profile



At a glance

Profile



Serving
key industries



Products and solutions
for a diverse range of
end-markets

Present
around the globe



Major sites in Europe,
Asia and the Americas,
close to the customers

Technologically
leading



Highly efficient,
environmentally
compatible processes

At a glance Strategy



Highly
innovative



Focused research and
development for current
and future needs

Sustainable



All activities targeting at
People, Planet, Profit

Experienced
workforce



Around 17,200
dedicated employees
worldwide

Sustainable products and applications



Covestro lightweight solutions to make a dream come true

YOU CAN'T
FLY AROUND THE WORLD
WITHOUT FUEL.
WHY NOT?



#PushingBoundaries #SolarImpulse



Sun in the tank

- *flying innovation lab*
- ultra-lightweight polyurethane foams for the cockpit and other components
- polycarbonate films for cockpit glazing
- specialty adhesives for composite material

Sustainable products

Covestro is rethinking its raw material base

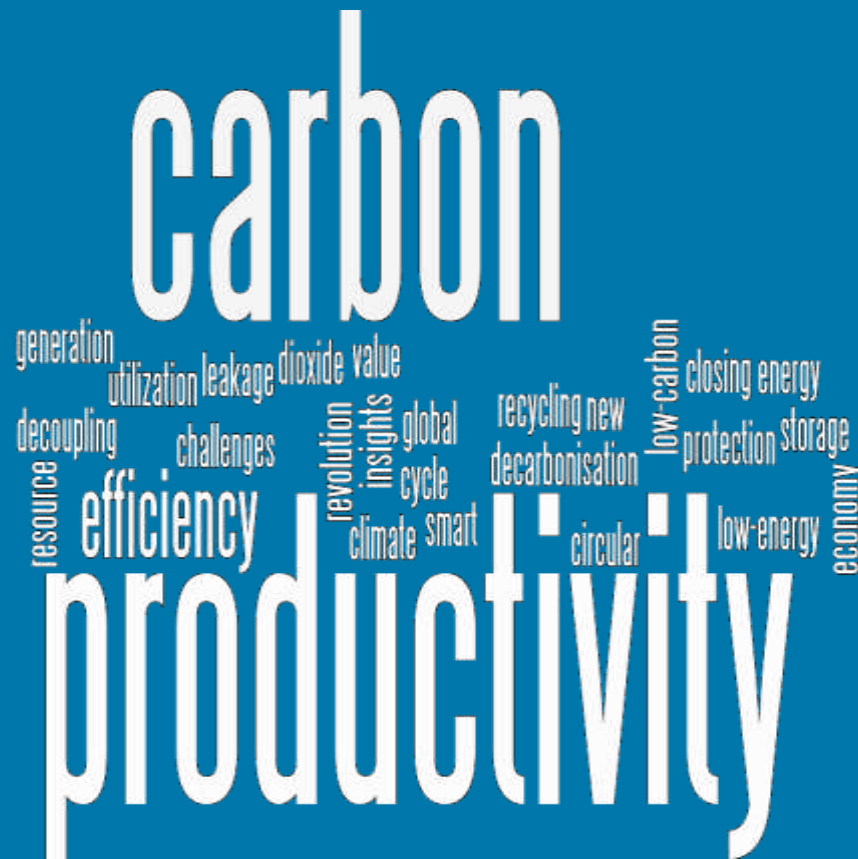


From pollutant to raw material

- Covestro is integrating CO₂ into the production chain
- *dream production*: CO₂ as raw material for polyols
- technical and commercial viability of CO₂-containing PU foam proven in two-year test phase

Carbon Productivity

...to use carbon as smart as possible



Our vision: Drive a new perspective on value creation through carbon



Our role:

- **Catalyse new insights** about carbon at various stakeholder levels
- Support collaborative creation of a tool which will be made available as **open source**
- Consortium is seeking to launch the initiative **at the UN Global Compact Breakthrough Summit** in September 2017

Covestro non-financial targets 2025

Implementation along the value chains



Ten million people in underserved markets benefited by our business solutions

We have undertaken to contribute to improve the lives of ten million people in underserved markets, primarily in developing and emerging countries, by the year 2025. In collaboration with customers, governmental and non-governmental organizations we intend to develop affordable solutions based on our technologies and products to jointly develop solutions that can be employed to the economic and social benefit of those in this sector. We will focus primarily on affordable housing, sanitation and food security applications in which our materials offer significant benefits.



Getting the most out of carbon

Our products are based on carbon. In order to ensure we are delivering positive returns on our use of this element, we aim to work with our value chains, public and non-profit sectors to establish a methodology to ensure our use of carbon delivers optimal productivity. Our carbon productivity initiative aims to increase the return on carbon invested throughout the value chain



Agenda

Chapter 2

**Connecting the outside to
inside:** *Materials for designing
building envelope*

**Solutions for Affordable &
Sustainable Homes**

Industries

Percentage sales



Construction – products

Rigid polyurethane foam

- well-insulating, lightweight
- for all parts of the building



Polycarbonates

- light, tough, transparent, readily formable
- for roof structures, façade elements, sports facilities



Polyurethane raw materials for coatings

- protective, resistant, decorative
- for façades, walls, floors

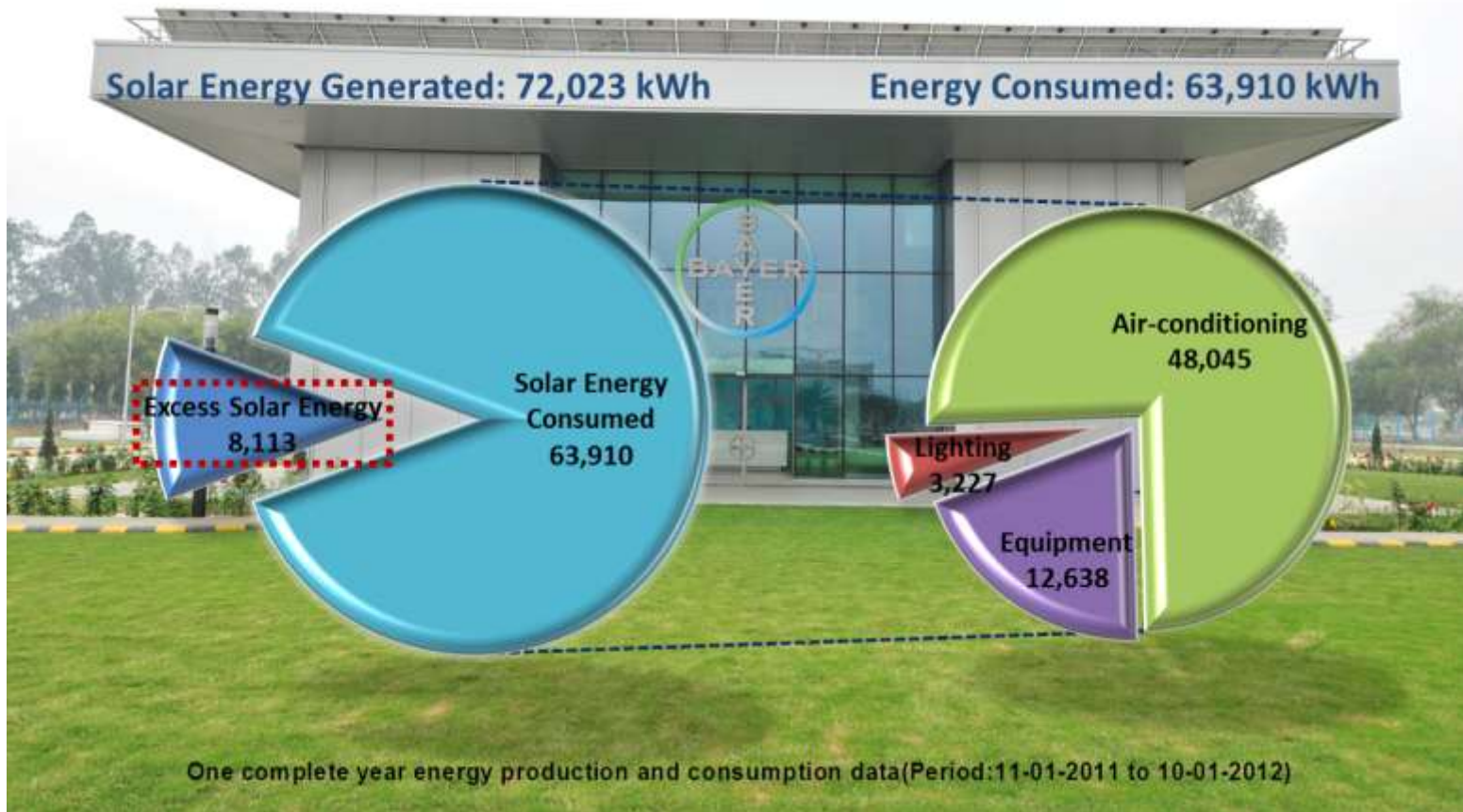


2011

The first milestone:



Annual Net-positive Energy Performance - Proof of the Concept





INDUSTRIAL INSULATION FOR MAXIMUM EFFECT

Rigid polyurethane foam saves around 70 times more energy during its service life than is required for its production.

- lightweight, functional, flame retardant
- for façades, walls, floors, ceilings, roofs



Construction – insulation

Rigid polyurethane foam enables fast, lightweight, green and energy efficient construction for decent living



LIVEABLE HOUSING FOR ALL

- lightweight, functional, flame retardant
- for composite wall panels
- fast installation, prefabricated
- less manpower
- energy-efficient
- earthquake resistant
- fire safe
- green materials like paper honeycomb & wood fibre
- affordable, low cost
- avoids sand and other scarce resources
- aesthetically neat finish
- deep foundation not required
- healthier as it moderates ambient temperature and allows thermal comfort.





Construction – Affordable Housing

SPEEDY DELIVERY WITH MAXIMUM IMPACT

Jaipur

Rigid PIR foam –based PIR panels G+3 structure in Jaipur in cooperation with Rajasthan Housing Board.

- lightweight, functional, flame retardant
- for façades, walls, floors, ceilings, roofs
- Fire resistance: 1200°C for 94 min
- Wind resistance: 180 km/hr for 2 hrs
- PIR absorbs zero moisture
- Thermal insulation
- High compressive strength



Kuala Lumpur, Malaysia: CIDB G+0 House Built-up Area: 1142.2 sq. ft.



Kelantan, Malaysia: Flood Rehabilitation

G+0 House Built-up Area: 812.48 sq. ft.



Baron Resort, Langkawi, Malaysia



Langkawi, Malaysia: Employee Quarters

G+4 House Top 2 floors for speedy construction



Tamil Nadu, India: 7 Green Houses (solar powered)
G+0 House Built-up Area: 350 sq. ft.



Rajasthan, India

G+3 House Built-up Area: 567 sq. ft.



Construction – insulation

INDUSTRIAL INSULATION FOR MAXIMUM EFFECT

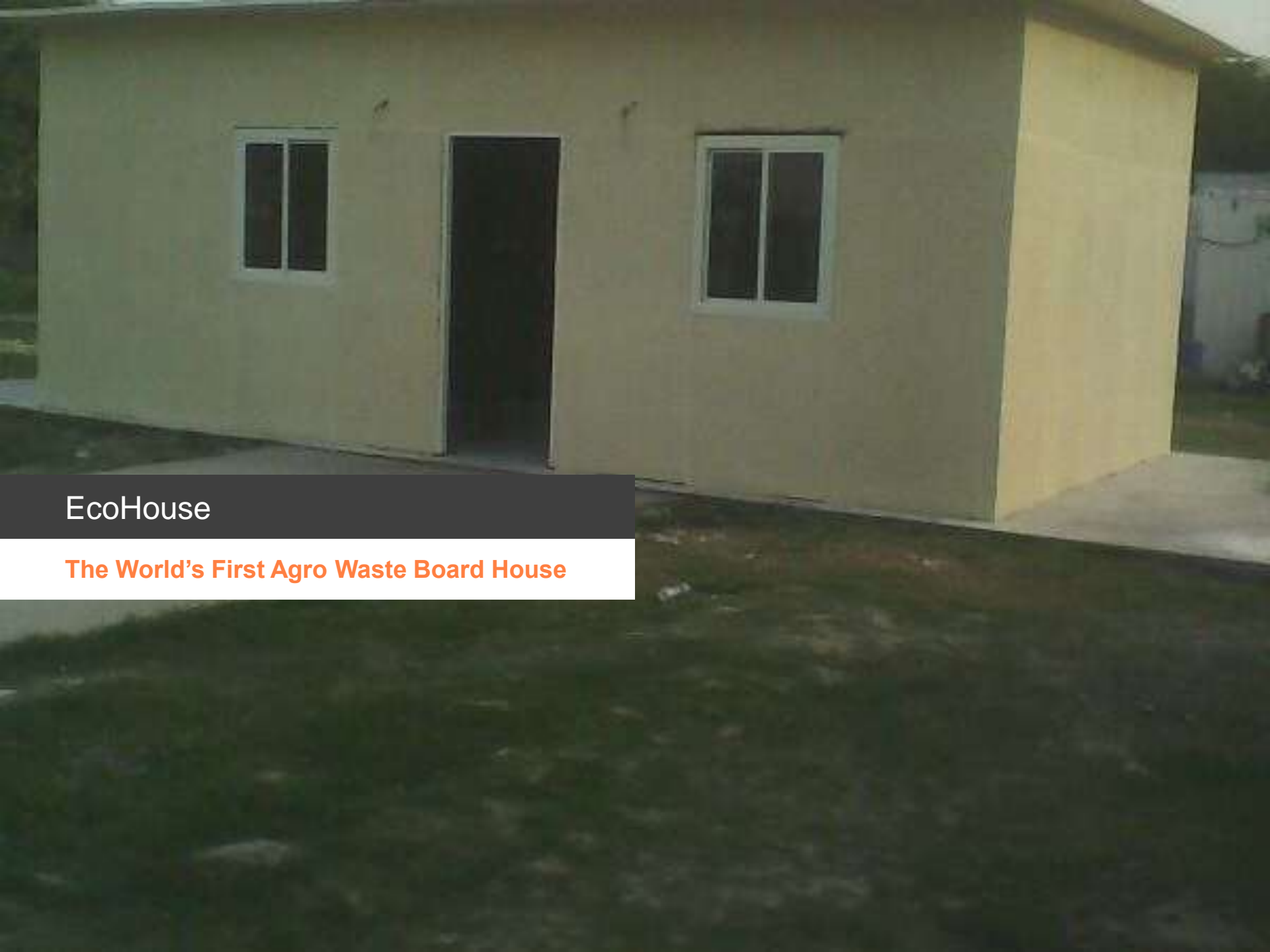
Location - India, Malaysia

PIR Technology based toilets were rated as best solution by third party independent auditors

community and school toilets as the next step

~ 177 Units installed in 2016





EcoHouse

The World's First Agro Waste Board House



Latur



**THE COMPANY IS
CONSTANTLY WORKING
TO IMPART ITS
KNOWLEDGE
PROCESSES AND
INCREASE YOUR
ENERGY EFFICIENCY.**



To make the world a brighter place



Forward-looking statements

This presentation may contain forward-looking statements based on current assumptions and forecasts made by Covestro AG.

Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual future results, financial situation, development or performance of the company and the estimates given here. These factors include those discussed in public reports of Covestro and Bayer which are available on the Covestro website at www.covestro.com as well as on the Bayer AG website at www.bayer.com.

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