



# Electric Powertrain @ Covestro

## Introduction

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# Covestro - Global Customer Support

Polyurethanes, Polycarbonates & Coatings, Adhesives & Specialties



## COVESTRO WORLDWIDE

Covestro operates around 30 production sites in Europe, Asia and America – eight of which have world-scale plants. In 2018 we had €14.6 bn in sales and 16.800 employees worldwide.\*

**30**  
production sites worldwide

**8**  
sites with world-scale production plants

**3**  
innovation hubs

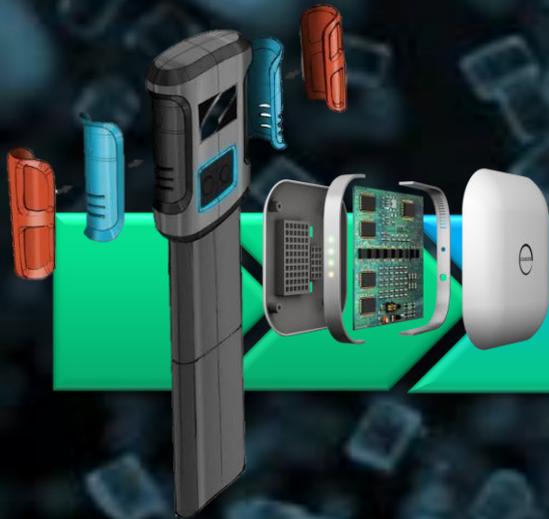
# Covestro Supports The Electrification Trend in Each Segment



Experiences from E/E and Automotive matches to battery packaging and electric powertrain

## Electrics / Electronics

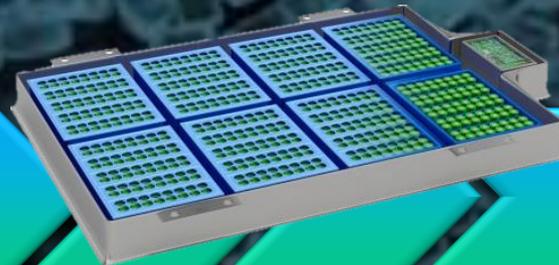
Design  
Dimensional stability  
Mass producibility



Charging &  
Controlling

## Battery packaging

FR retardance  
Dimensional stability  
Ductility



Storage &  
Protection

## Electric powertrain

FR retardance  
Heat resistance  
Ductility



Propulsion &  
Supply

## Automotive classic

Durability  
Design  
Safety



Consumption &  
Sensor Technology

# Covestro polycarbonates portfolio

Our four main products and their benefits



## Makrolon<sup>®</sup>

Amorphous, dimensional stable & impact resistant polycarbonate

- Transparent / opaque
- Glass filled
- FR grades
- Thermo-conductive
- Different flowabilities



## Apec<sup>®</sup>

Outstanding heat resistant polycarbonate co-polymer

- Vicat up to 200 °C
- FR grades
- Different flowabilities



## Bayblend<sup>®</sup>

PC+ABS or PC+ASA blends adding excellent low temperature toughness to polycarbonate

- Different ABS/ASA contents
- GF & MF
- FR grades
- Colors



## Makroblend<sup>®</sup>

Ultra tough engineering PC+PET or PC+PBT blends

- Different PBT/PET contents
- GF & MF
- FR grades
- Colors

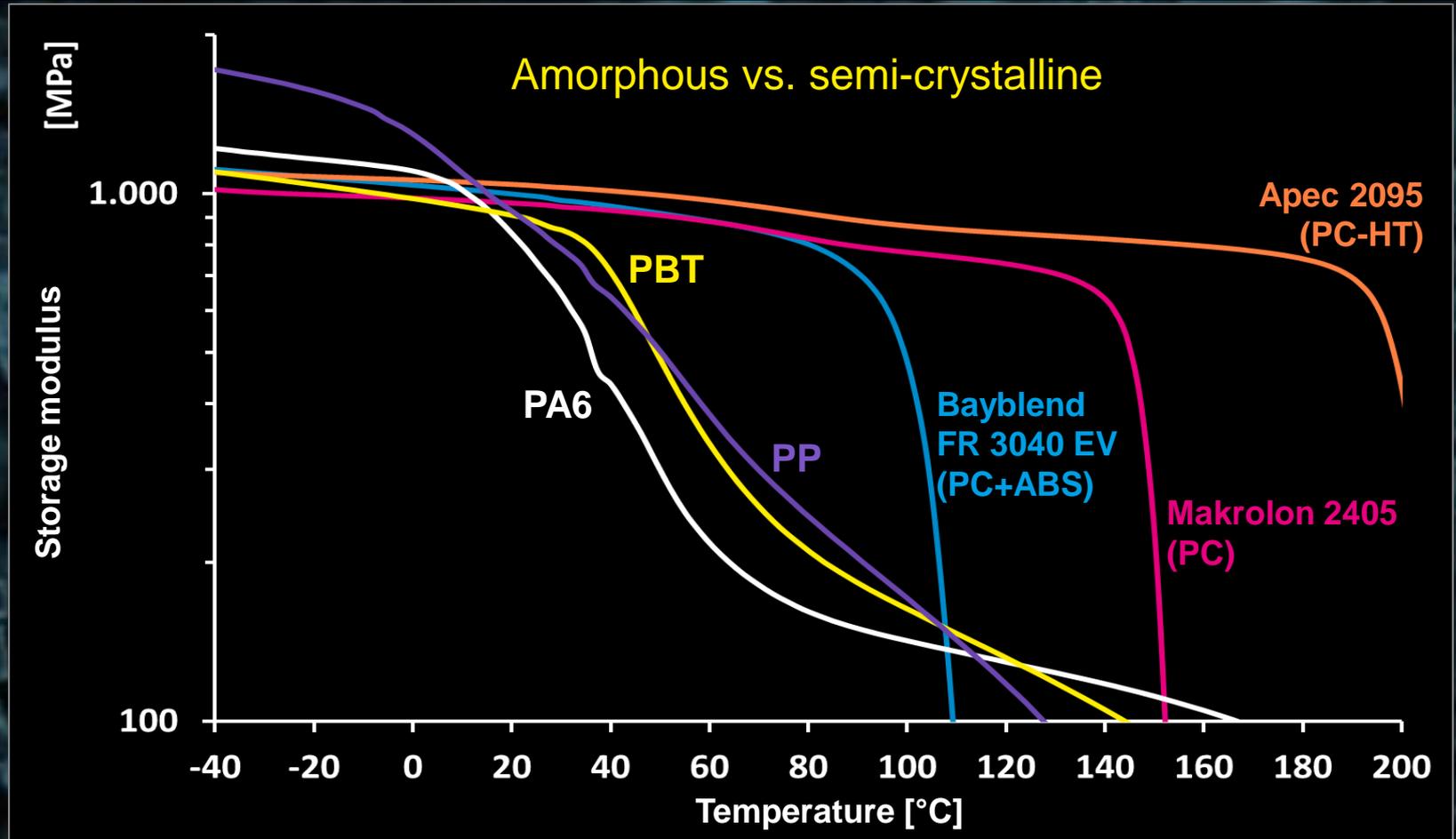
# Properties of Polycarbonates



Amorphous materials are constant over a wide temperature range

## Outstanding properties in

- ✓ Toughness
- ✓ Heat Resistance
- ✓ Fire Resistance
- ✓ Dimensional Stability
- ✓ (Sensor) Transparency



Source: Covestro data & measurements, not guaranteed by this presentation.  
Please refer to the official Covestro material data sheets.  
PA6, PBT & PP: Examples, others may differ.



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