

*Makrolon® RE Bayblend® RE Makroblend® RE Apec® RE

The RE product series*: Pioneering Circular Material Solutions



Premium RE Thermoplastics: Advancing Sustainable Material Solutions

In our relentless pursuit of sustainability, we present the RE product series: **Makrolon® RE**, **Bayblend® RE**, **Makroblend® RE**, and **Apec® RE**. These materials represent a significant stride towards intelligent circular material solutions, tailor-made as direct drop-in solutions for a reduced carbon footprint of your final product.

At Covestro, we abide by a fundamental principle: harnessing renewable raw materials and clean energy from renewable sources to craft more sustainable polycarbonates. Our commitment to the circular economy is unwavering.

Our Circular Intelligence (CQ) solutions represent a smarter approach to sustainable materials and technologies. **CQ**, short for **“Circular Intelligence,”** is more than a concept; it’s a pledge. With the CQ label, we substantiate our dedication to realizing a circular economy, spanning from cradle to cradle.



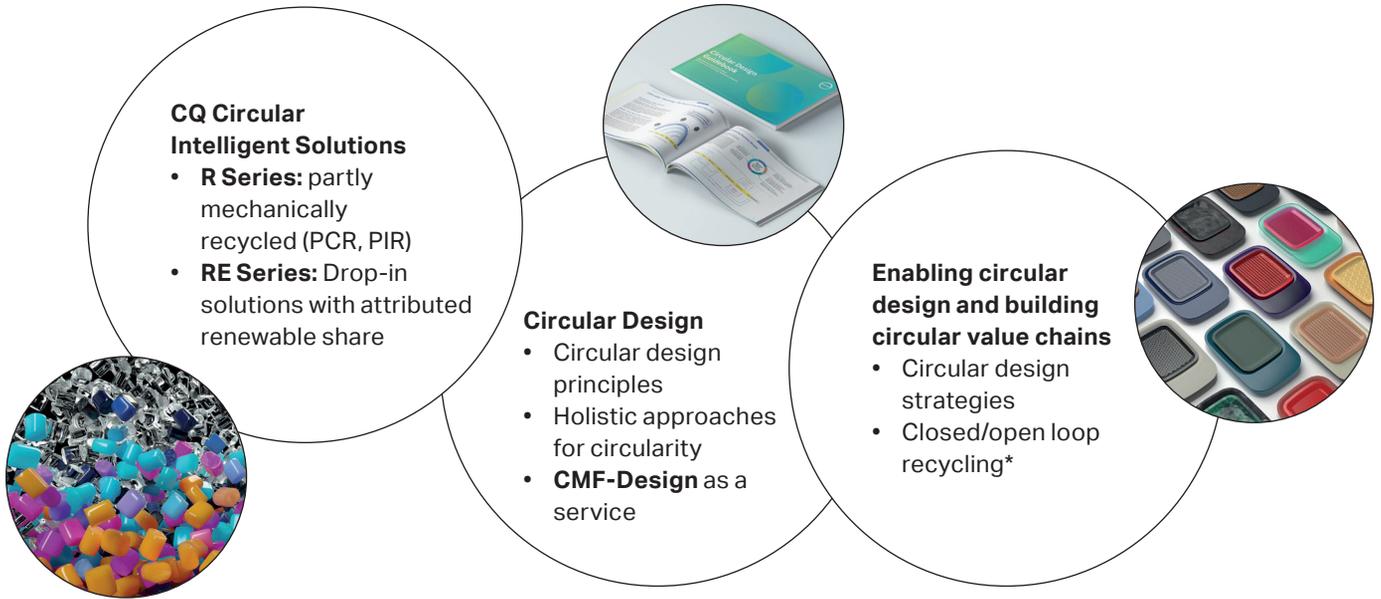
A Sustainable Polycarbonate Portfolio for a Brighter Tomorrow

Within our Engineering Plastics portfolio, we offer an array of sustainable options. Our polycarbonates and polycarbonate blends, available as post-consumer-recycled/post-industrial-recycled grades (**R series**) and **polycarbonates (RE series)**, incorporate a substantial proportion of renewable raw materials. Our **Color Material Finish (CMF)** team provides holistic design approaches, emphasizing circular material choices and assisting in closed/open loop recycling strategies.

In collaboration with like-minded partners, we’re endeavoring to close material loops and breathe new life into alternative raw materials by transforming them into more sustainable polycarbonates.

* Specific product savings differ according to the product properties. Shown values represent selected Makrolon® RE grades.

1 Life cycle assessment (LCA) calculation acc. to ISO 14040/14044. LCA with preliminary value chain data, cradle to gate, biogenic carbon included, with no burdens from first life, impact assessment acc. to CML 2001-Aug 2016, replacing key raw materials with mass balanced bio-circular ones according to ISCC PLUS, replacing electricity grid mix with renewable electricity used for the manufacturing processes from Covestro when feasible. No compensation measures have been applied. The LCA methodology developed by Covestro AG is scientifically based and reflects the state of the art. ID No. 0000083440: Covestro AG – Certipedia. Covestro has implemented a management system certified by TÜV ID-Nr. 0000084999: Covestro AG – Certipedia that legitimates the allocation of renewable electricity to selected products, implemented now on specific sites. RE products have a low GWP (global warming potential), selected grades at selected sites are climate neutral. Climate neutral products are those with a GWP equal or lower than zero. At sites without renewable electricity allocation up to 85% carbon footprint reduction is possible. 2 Bio-circular attributed via mass balance according to ISCC PLUS. Acc. To the ISCC PLUS system document V3.4 the heteroatoms count under specific circumstances as part of the sustainable share. An RE product with 89% sustainable share acc. to the version 3.4 is related to the same amount of biological waste and residues as an RE product with 72% acc. to the version 3.3 or earlier. ISCC PLUS (iscc-system.org). 3 An equivalency statement can be provided. 4 Based on ADP fossil category at LCA calculation considering materials and energies as described in 1.



Renewable-Attributed Polycarbonates: For a More Circular and Sustainable Future

Our **RE product series** takes its place within the CQ portfolio of circular intelligent solutions from Covestro, contributing to our vision of becoming fully circular. The „**RE**“ in the product name signifies „**renewable**“ and signifies a significant shift towards low-carbon materials derived from renewable sources. Fossil resources are steadily being replaced by

renewable alternatives sourced from bio-waste and residues while maintaining the performance and quality of primary fossil-based polycarbonates. **The RE product series** encompasses **Makrolon® RE** polycarbonates, **Bayblend® RE**, **Makroblend® RE**, and **Apec® RE**.

Here you find the RE material properties at a glance:



Significant carbon footprint reduction:

- Up to **100% – climate neutral**¹
- Partially produced with **100% renewable electricity**¹



Bio-circular attributed share:

- Up to **89% attributed bio-circular sustainable share**
- **ISCC PLUS certified** for systematic traceability
- Up to **50% less fossil resources** required



Seamless Transition:

- **Drop-in solution** with consistent high quality
- Zero implementation effort
- Identical physical, mechanical, thermal, optical, electrical, weathering, and processing properties as conventional **Makrolon®** resins
- The **RE resins** maintain **lot-to-lot consistency** and are co-listed on respective **UL cards** and **Ameca**
- Availability in large quantities, ensuring a fast time to market without costly requalification

Interested in more information about our RE portfolio?

Join us on our journey towards a more sustainable future with intelligent circular material solutions. Let's make a lasting impact together!



Covestro Deutschland AG
Kaiser-Wilhelm-Allee 60
51373 Leverkusen
Germany
info@covestro.com
www.covestro.com

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance, information, and recommendations to determine to your own satisfaction whether our products, technical assistance, and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been conducted by Covestro. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale, which are available upon request. All information and technical assistance are given without warranty or guarantee and are subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability - in tort, contract, or otherwise - incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.
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