INSQIN® new partially bio-based and mass balanced polyurethane dispersions for textile coatings.

Impranil® CQ

bluesign SYSTEM PARTNER

ROADMAP TO ZERO By ZDHC

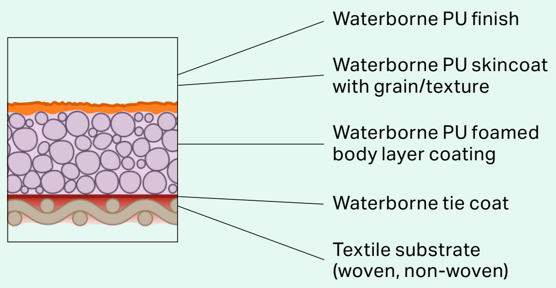
covestro

High performance enabled by nature: New partially bio-based and mass balanced polyurethane dispersions for textile coatings

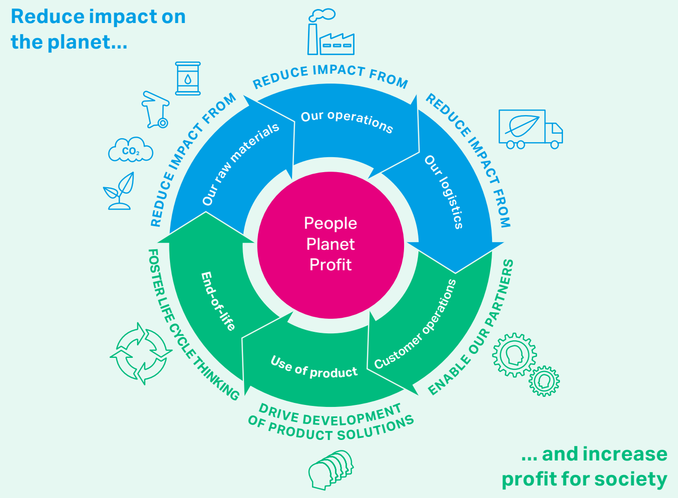
Increasingly, sustainability is affecting the product and raw material purchasing decisions of customers, brand owners, and consumers. Biomass is already the raw material basis for around 10% of all chemical products. New technologies, cooperative agreements and product developments will enable the textile coating industry to move forward in using more products based on renewable resources.

Covestro has developed a technology to raise the content of renewable resources in polyurethane dispersions (PUDs) to 62%. This makes new levels of sustainability possible for PU-coated textile materials. Thanks to this development, it is now possible for manufacturers to produce coated fabrics with a lower content of fossil-based raw materials. These partially bio-based or mass balanced products offer the same level of properties as products based on traditional raw materials.

Synthetic coated textile structure



Sustainability targets



Key benefits of **Impranil® CQ** PUDs:

- 34%–67% renewable carbon content derived from non-fossil based inputs.
- Good light fastness, excellent resistance to abrasion.
- Excellent perceptual quality.
- More sustainable thanks to reduced CO_2 footprint.
- Better water and energy utilization during production.
- Suitable to be used for a variety of textile coating applications.
- Excellent compatibility with conventional PUDs.
- Mass-balance products are chemically and physically identical to the conventional products and can be easily implemented within your production process, with no technical risk and no further approvals.

Product	Type	Verification process*	Alternative carbon share - bio-based [%]**	Solid content [%] (DIN EN ISO 3251)	100% Modulus [MPa] (DIN 53504)***	Tensile Strength [MPa] (DIN 53504)***	Elongation at Break [%] (DIN 53504)***
Impranil® CQ 2566	Partially bio-based polyether	Segregation approach	~67	29-31	5	52	760
Impranil® CQ DL 1878	Partially bio-based polyester	Segregation approach	~56	50	1.7	12	800
Impranil® CQ DL 519	Partially bio-based polyester	Segregation approach	~38	40	9	40	450
Impranil® CQ DLS/1	Partially bio-based polyester	Segregation approach	~50	50	2.5	30	800
Impranil® CQ DLU	Partially bio-based polyether/ polycarbonate	Segregation approach	~34	54-56	2.5	25	700
Impranil® CQ DLP-R	Polyester	Mass balance approach	41	48-52	0.9	10	200-220
Impranil® CQ DLU MS	Polyether/Polycarbonate	Mass balance approach	54	58-62	2-3	30	200-230

*Segregated process allows traceability of renewable feedstock in end products; ISCC PLUS certification to secure transparency, trustworthiness of the Mass Balance method
**Calculated minimum content of carbon derived from bio-based raw materials.
***These values provide general information and are not part of the product specification.

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