



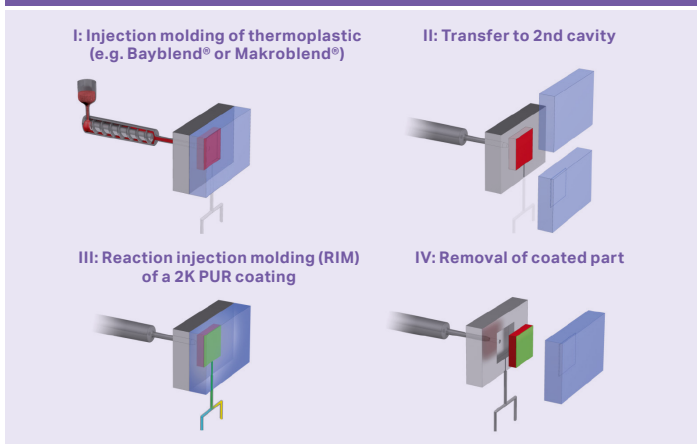
Desmophen<sup>®</sup> Desmodur<sup>®</sup>

Achieve high-quality decorative car components from a single mold. Why not?



# DirectCoating process: More design freedom and efficiency

## How it works



DirectCoating, an innovative technology developed by Covestro for coating plastics, is an integrated process combining the traditional molding of thermoplastics with reaction injection molding of a near zero-VOC polyurethane coating. The DirectCoating process is designed to reduce complexity in the production of automotive exterior or interior trim parts (integrated coating process), and allow surface properties from textured matt to high-gloss in one combined process.

### Main benefits:

- Premium appearance in combination with functions for high design flexibility
  - Rigid or flexible coatings with high gloss effects
  - Haptic and matte gloss coatings with texture effect
  - Depth effect achievable with transparent coating layer ranging from 200 µ to 1 mm thickness
- Improved production efficiency
  - Highly automated production process
  - Short cycle time
  - No need for separate spray line or baking oven
  - Simpler logistics

## Textured and soft automotive interior surfaces manufactured using the DirectCoating process



Thermoplastic grades have been developed in our **Makrolon®**, **Bayblend®** and **Makroblend®** product ranges.

## A selection of recommended products for DirectCoating PUR RIM applications

PRODUCT	DESCRIPTION	REACTIVE GROUPS (APPROX. CONTENT)	PROPERTIES
Desmodur® N 3600	Standard low-viscous HDI trimer	NCO 23.0%	Standard crosslinker with balanced properties
Desmodur® N 3500	High-functional HDI allophanate/trimer	NCO 19.5%	Highest functionality; offers self-healing properties
Desmodur® N 31100	Low-viscous HDI trimer	NCO 23.5%	Low-viscous crosslinker with also high crosslinking density (>3)
Desmodur® XP 2860	Very low-viscous allophanate	NCO 20.0%	Flexibilizing; can be blended in to lower the viscosity
Desmodur® XP 2489	HDI/IPDI trimer	NCO 21.0%	For hardness and higher Tg
Desmodur® eco N 7300	Bio-based PDI trimer	NCO 21.5%	Bio-based crosslinker with the same properties as standard HDI trimer
Desmophen® XP 2488	Hard polyester	OH 16.0%	Hard, glossy and highly resistant
Desmophen® VP LS 2249/1	Hard polyester	OH 15.5%	Standard grade
Desmophen® VP LS 2328	Medium-soft polyester	OH 7.95%	Higher flexibility, yet resistant
Desmophen® 1652	Very soft polyester	OH 1.6%	Blend in to yield more haptic surfaces
Desmophen® C 1100	Soft polycarbonate diol	OH 3.3%	Standard for haptic surfaces
Desmophen® C 1200	Very soft polycarbonate polyester	OH 1.7%	Strongly haptic surfaces
Desmophen® C XP 2716	Medium-soft polycarbonate diol	OH 5.2%	Semi-haptic, yet highly resistant

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<sup>1</sup>Please see the "Guidance on Use of Covestro Products in a Medical Application" document.  
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