

## Materials and Surfaces

## PVD Thin Films

Sulzer Innotec

**Polymers**

Improve the performance of your polymers with our customised PVD surface coatings.

PVD coatings offer minimum wear, optimal frictional behaviour, reduced or prevented sticking, higher durability and longer service intervals, highest quality, chemical stability, high surface energy, decorative surfaces.

**What we offer**

- Comprehensive services by our team of experts
- Standard type PVD coatings customised to specific requirements
- Implementation of theoretical and practical concepts into technical solutions
- Development of new, innovative coating solutions
- Interdisciplinary approach
- Support from construction to production
- Coating services for prototypes and small scale production
- Quality system ISO 9001 /ISO 14001

**Innovation:**

*Reduction of friction on elastomers*



*PVD-DLC coated seals for friction reduction*

**Examples for coatings**

- Diamondlike Carbon (DLC): low wear, extremely low friction, chemically inert
- Nitrides: hard, low wear, decorative; e.g. Titanium nitride (TiN)
- Carbides: very hard, low coefficient of friction; e.g. Titanium carbide (TiC)
- Polymer-like flexible layer for friction reduction
- Modified DLC as adhesion layer

**Example for special development**

*PVD-DLC coating on silicone for friction and abrasion reduction on a printer roller application*

**Examples for applications**

- Reduction of friction and wear
- Hard and conductive layers
- Prevention of stick-slip effects; e.g. for seals
- Prevention of sticking; e.g. silicone
- Long-term stability of high surface energy
- Decorative films; e.g. gold-coloured TiN or ZrN, anthracite coloured DLC; high adhesion
- Biocompatible coatings on implants

Sulzer Innotec has special Know-How in surface modification of polymers. We are constantly extending the scope of applications for our PVD coatings. With us, you profit from our experience and participate in the newest developments.

For further information please contact our specialists.

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