

# TempCoat®

fluoropolymer coatings



**A** surface  
technologies  
aalberts

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Many manufacturing processes involving metal surfaces in contact with the product would be very difficult to resolve in a satisfactory way, even with highly refined metal surfaces. Only the use of special fluoropolymers produces hydrophobic surfaces with very low surface tension, which effectively prevents the adhesion of various substances such as adhesives, rubber and plastic materials. The non-stick effect is further increased by reducing the surface contact area through targeted modification of the surface structure with defined roughness profiles. The surfaces modified in this way are indispensable in a wide variety of industries and applications such as printing, baking, the chemical industry and even high-class frying pans. The Aalberts surface technologies solution is called TempCoat®. The efficient and trouble-free processing and handling of metals, plastics and paper in various production processes is no longer conceivable without the excellent anti-friction properties of product-contact-

ing surfaces. Fluorinated polymers are indispensable as coating materials for such applications due to their low friction coefficients for static and sliding friction. The typical minimal difference between the two values offers the great advantage of reducing the stick-slip effect in reciprocating motion.

TempCoat® fluoropolymer coatings offer outstanding non-stick properties, anti-friction properties or high chemical resistance. Combinations of different properties are also possible. Both the use of special additives, such as graphite or molybdenum disulphide, and the multilayer structure including reinforcing layers, make it possible to adapt the layers specifically to the desired application. For example, multilayer, wear-resistant, non-stick systems improve demoulding processes or the excellent dry lubrication properties of anti-friction systems protect sliding components from failure.

TempCoat®	process details
Applications	folding shoes, casting tools, laminating tools, glue tanks, ball valves, gear wheels
Coatable base materials	aluminum, steel, stainless steel, ceramics, copper (limited), plastics, cast iron, glass
Pre-treatment	degassing, sandblasting, degreasing
Properties	excellent non-stick properties, easy cleaning, high chemical corrosion protection, good non-stick and anti-friction properties
Performance characteristics	<b>layer thickness:</b> 7 µm - 1.5 mm <b>friction coefficient (stat.):</b> up to 0.09 (against mild steel) <b>roughness:</b> Ra up to 1.0 µm
Service	We find the optimal coating process for your components based on an individual consultation. From the first sampling to the introduction into series production, we define the relevant production steps together with you. On request, we can also supplement our technical services with a logistics concept tailored to your needs, including pick-up and delivery services.