

cardient® coatings overview

**Ultimate
surface
coatings.**



Properties	cardient® FMC®	cardient® HydroX	cardient® resist	cardient® superhart	cardient® TiX	cardient® tribo	cardient® tribo medical
Hardness (HV)	1000 - 3000	-	3200 - 4000	4000 - 6000	1600 - 1800	2500 - 3000	2500 - 3000
Friction against steel	< 0,05	-	< 0,15	< 0,09	-	< 0,09	< 0,09
Thickness	10 - 100 nm	10 - 30 nm	0,5 - 2,5 µm	0,05 - 0,2 µm	300 nm - 2 µm	0,5 - 2,5 µm	0,5 - 3,5 µm
Processing temperature	< 50 °C	< 50 °C	< 180 °C	< 150 °C	-	< 180 °C	< 180 °C
Operating temperature	max. 600 °C	-	max. 600 °C	max. 600 °C	max. 290 °C	max. 600 °C	< 450 °C
Diffusion resistance	10 ⁻⁵ with water	10 ⁻⁵ with water	-	-	-	-	-
Contact angle (with water)	-	20 - 100 ° (depending on doping)	-	-	0 ° (3 h stable) with UV light 6 - 25 ° (stable) without UV light	-	-

Usage	cardient® FMC®	cardient® HydroX	cardient® resist	cardient® superhart	cardient® TiX	cardient® tribo	cardient® tribo medical
Polymer materials	√	√	-	-	-	-	-
Glass	-	-	-	-	√	√	√
Metals	-	√	√	√	√	√	√
Ceramics	-	√	√	√	√	-	-
Special plastics	-	-	√	√	-	√	√
Temperature sensitive materials such as hardened steel	-	-	√	√	-	√	√
Highly temperature sensitive materials	√	√	-	-	-	-	-

Application Areas	cardient® FMC®	Cardient® HydroX	cardient® resist	cardient® superhart	cardient® TiX	cardient® tribo	cardient® tribo medical
	Catheters. Stents. Sensors.	Microfluidic systems. Urological and vascular catheters.	Cutting tools. Easily smeared tooling. Applications demonstrating high cutting friction.	Medical cutting tools. Micro structured surfaces.	Diagnostic surfaces. Optical devices. Bone implants.	Motor parts. Gearbox parts. Bearings.	Endoprothetics. Bone drills. Bone screws.

