

**Pure
and
Bacteria
free.**

**The
self
cleaning
coating.**

Properties

cardient® TiX is a supercrystalline titanium oxide coating with some very special properties. When exposed to UV light it remains photocatalytic for several hours which causes hydrogen bonds to break leading to a breakdown of biological material. The released hydrogen radicals kill bacteria and germs – the surface becomes germ free. The surface is also hydrophilic making it easy to clean with water

cardient® TiX surfaces are:

- ✓ Selfcleaning.
- ✓ Antibacterial.
- ✓ Antifouling.
- ✓ Antifogging.

Hardness	1600 - 1800
Contact angle with UV light (water)	0 ° (3 h stable)
Contact angle without UV light (water)	6 - 25 ° (stable)
Thickness	300 nm - 2 µm
Operating temperature	max. 290 °C

Usage

- Hard materials such as glass, metal alloys and ceramics.

Application areas

- Diagnostic surfaces.
- Optical devices.
- Bone implants.

Examples

- When moving from cold to warm locations small water drops form on the surface of glasses leading to a fogging of the surface. With cardient® TiX coatings an invisible uniform water film forms immediately – there is no fogging!
- Dental implants with a permanently hydrophilic coating of cardient® TiX form permanent and rapid adsorption of blood leading to the potential for a faster osseointegration.

Coating process

cardient® TiX is created in a low pressure plasma. As the coating temperature exceeds 200 °C only suitably temperature resistant materials can be coated.

