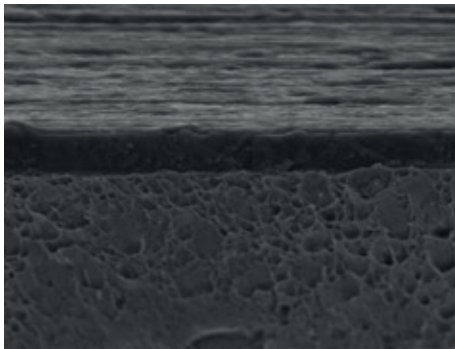


## Tribobond™ 48 DLC



### Hydrogen-free DLC coating for high temperature applications

Tribobond™ 48 ta-C is a hydrogen-free DLC coating with an increased temperature resistance of up to 400 °C compared to 250 °C for hydrogenated DLC coatings. Typical applications thus include high-loaded mechanical components, which further benefits from the increased wear resistance and the reduced coefficient of friction of the coating. The coating also exhibits an improved wettability with oils, gasoline and diesel fuels. Tribobond™ 48 ta-C has been thoroughly tested on valve train (e.g. tappets) and crank train (e.g. piston pin / ring) components as well as injection systems and pumps, where it has shown to significantly improve the robustness and to increase the lifetime of the parts involved.



### Performance

When combined with specifically formulated oils, Tribobond™ 48 ta-C reduces friction losses by a factor of 2, compared with hydrogenated DLC coatings lubricated with standard oils. Finally, the abrasive wear resistance of Tribobond™ 48 ta-C surpasses hydrogen-containing DLC coatings by a factor of fifty when used at temperatures above 200 °C, which makes it an ideal coating for components of high-loaded assemblies used at elevated temperatures.

#### Technical Data

Material	Cr + ta-C
Technology	PVD Arc
Thickness range	0.5 – 1.5 µm
Nanohardness, HV	4000 – 8000
Friction vs. Steel	< 0.1
Service Temperature	400 °C
Process Temperature	200 °C
Color	Black
Application Reference	Low friction, wear resistance for sliding contacts