

**CURTISS -  
WRIGHT**

# PEO coated lightweight aluminium brake disc

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**Curtiss-Wright** is revolutionizing the way we brake by breaking barriers in materials science with an audacious proposal: aluminum brake discs. Imagine shedding up to 20kg from your vehicle's weight, enhancing fuel efficiency, and redefining performance. Our secret weapon? Keronite Plasma Electrolytic Oxidation (PEO) technology. Witness the transformation as our PEO coatings, fortified with a super-hard crystalline  $Al_2O_3$  ceramic coating, elevate aluminum discs to defy extremes of temperature, corrosion, and wear. It's not just innovation; it's a paradigm shift. Are you ready to embrace the future of braking?

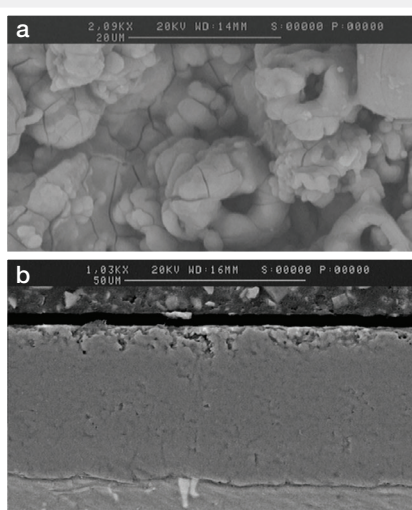


Fig.2 SEM images of the PEO ceramic coating, surface (a) and cross-section (b).



Fig.1. GCI disc (left) and PEO-Al disc (right).

## What is Keronite PEO?

- PEO technology is essentially plasma-assisted anodising in an environmentally safe, low-concentration alkaline electrolyte that is free of Cr, heavy metals, volatile organic compounds and strong acids.
- Millions of very short-lived plasma discharges, like microscopic bolts of lightning on the surface of a component transform the surface layer into materials such as Corundum ( $Al_2O_3$ ) on Aluminium.
- Similar to anodizing, but employs much higher potentials (typically 400V-1000V), so that discharges occur and the resulting plasma modifies (and enhances) the structure of the oxide layer.
- Due to very high hardness and a continuous barrier, these coatings offer enhanced protection against wear, corrosion as well as electrical/thermal insulation in addition to many other properties.

For more information about PEO, visit our website  
[www.keronite.com](http://www.keronite.com) or contact us at [ker-info@cwst.com](mailto:ker-info@cwst.com)

**Keronite**