

ultrafine COATINGS

eifeler's proprietary family of next-generation PVD arc coatings



12/2025 - Specifications are subject to change without notice

For eifeler, ultrafine is more than a name – it is our proprietary family of coatings that set a new benchmark for PVD arc technology.

While many can achieve “smooth,” ultrafine goes further: coatings that combine density, adhesion, and durability in one refined process.

At the core of ultrafine is our innovative gas control mechanism, enabling coatings with consistently low defect

levels and outstanding surface quality. Already proven in serial production, TiN-ultrafine, TiCN-ultrafine, SISTRAL®-ultrafine, among others, demonstrate the versatility of this technology across demanding applications.

The result is a coating family characterized by exceptional bond strength and long-lasting performance, trusted wherever precision and reliability are critical.

APPLICATIONS

Cutting	Cutting Microcutting
Other	Plastic injection Medical technology Cold Work

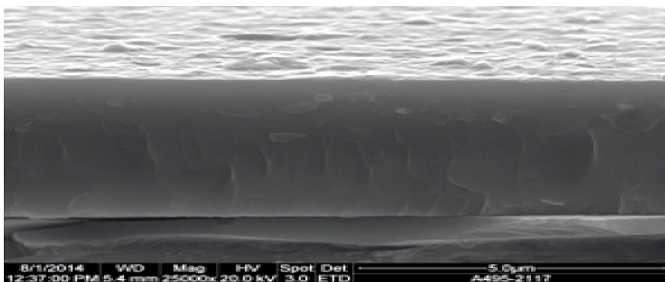


Fig. 1: Fracture pattern of a SISTRAL®-ultrafine PVD coating: smooth and dense

BENCHMARK TEST OF TiCN-ultrafine: MILLING OF HOT WORK STEEL

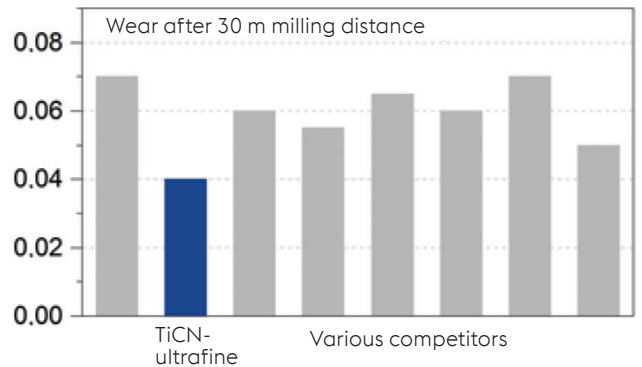


Fig. 2: Milling with HSS milling cutter (4 cutting edge, Ø10 mm) in 1.2738 hot work steel (40CrNiMo8-6-4), $v_c = 60\text{m/min}$, $f_z = 0.05\text{mm}$, $a_p = 12\text{mm}$, $a_e = 2.5\text{mm}$, milling distance = 30 m, down-milling = 50 %