

SAVROC

HARD CHROMIUM TECHNOLOGY

Savroc – Advanced Coating Solutions

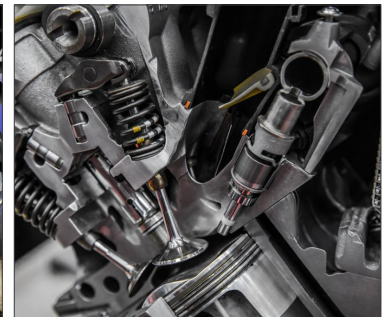
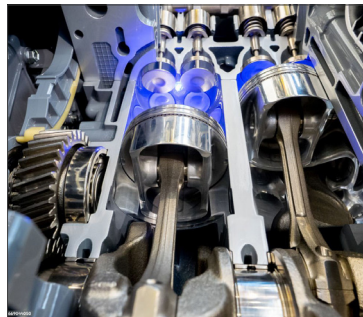
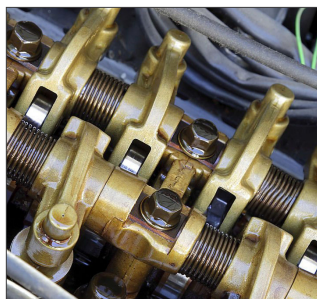
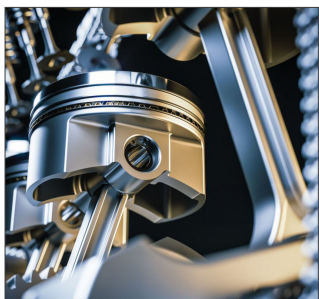
TripleHard® – Engine Part Protection

Savroc develops advanced coatings with superior wear resistance, corrosion protection, and sustainability. Our patented TripleHard® coating outperforms Cr6, eliminating hazardous chemicals while meeting industry standards.

High hardness | Low friction | Cr³⁺-based | Cr⁶⁺-free | Corrosion resistant

Key Points

- 900–1500 HV without annealing
- High adhesion – no delamination under load
- Withstands pressure and impact
- Compatible with CrFeNiC alloys
- No loss of hardness at high temperatures



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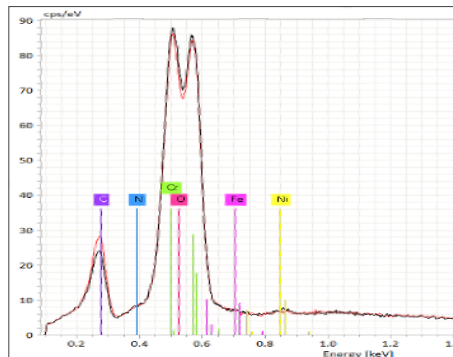
Comparative Coating Technologies Feature

Feature	Cr ⁶⁺ Coating	Nitriding	HVAF	Laser Cladding	TripleHard®
Hardness (HV)	800–1000	1000–1200	1100–1400	900–1300	900–1500
Friction Coefficient	0.2–0.3	0.2–0.3	0.2–0.25	0.2–0.3	0.15–0.2
Cost (€/unit)	Low	Moderate	High	High (energy use)	Low
Environmental Impact	Hazardous (Cr ⁶⁺)	↑ CO ₂ (high temp)	Medium	Very high (energy)	Safe (Cr ³⁺ , no Cr ⁶⁺)
Corrosion Resistance	Good	Moderate	Good	Very high	Excellent
Temperature Resistance (°C)	350–400	500–600	700–800	>800	700
Impact Resistance	Moderate	Poor	Good	High	High
Coating Thickness (µm)	5–200	100–500	60–300	100–800	5-70, in some cases up to 150
Suitability for Sliding Parts	Limited	Limited	Good	Poor	Excellent
Process Complexity	Low	Moderate	High	Very high	Moderate

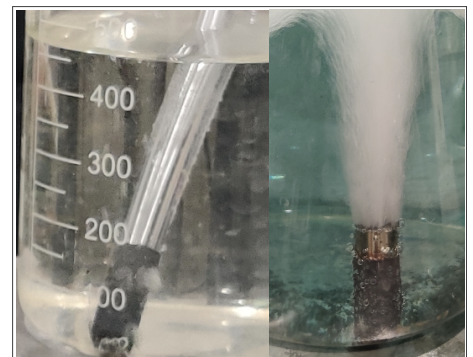
Analytical Evidence



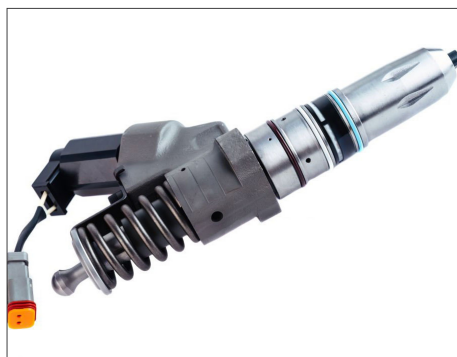
Injector Pins



Composition and Microstructure of TripleHard® Alloy



High Corrosion Resistance



Injectors



Valve



High pressure pistons

Schedule a meeting with our experts.
 Discover real-world applications
 Learn about our exclusive industry partnerships

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