

TripleHard® – Wear Protection for Extreme Conditions

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

- Up to 1500 HV hardness no thermal treatment
- Passed 30° bending test
- Up to 5× longer lifespan vs Cr6+
- Cr6+-free, sustainable solution
- Works on complex 3D geometries













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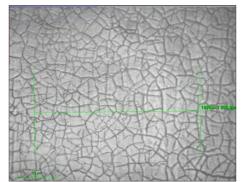
in savroc-ltd



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 (Cr³+, no Cr6+)
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



TripleHard® Coating Crack Network



Undercarriage parts



Structure of the TripleHard® Coating



Coated joints



Coated parts



Coated pins

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