

Coating datasheet

XRed



INFINITE POSSIBILITIES.®

QUICKGRIND®
carbide tooling

XRed

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The coating for challenging cutting conditions

XRed TiSiN is engineered to withstand temperatures of up to 1100°C at the cutting edge, making it perfect for the machining of hard materials at high speeds and with low or no lubrication.

Its multi-layer coating, with crystalline TiN matrix/Si₃N₄ nano crystallite outer layer, is designed to protect the cutting edge from excess wear, oxidation and heat transfer.

High speed machining of titanium, stainless steels, super alloys and steels

XRed is ideal for machining titanium, stainless steels, super alloys and steels up to 60 HRC. It is very capable in applications such as roughing, trochoidal milling, semi-finishing and finishing where there are high temperatures at the cutting edge. Quickgrind's high quality grinding and expertise allows for excellent chip formation and evacuation at high speed and feed without fear of damage to the tool or the component. The coating can be applied to virtually any of our solid carbide tools and will be offered where applicable.

All cutting data shown is subject to application and machining parameters. Please contact our Technical Support team for advice.



Technical data	
Coating material	TiSiN
Coating thickness	2-4µm
Deposition process	PVD Arc
Hardness HV 0.05	3500
Oxidation temperature	1100°C
Coefficient of friction	<0.4
Process temperature	450-550°C
Colour	Copper

Cutting speed M/min	40	60	80	100	120	140	160	180	200	220	250	300
Steels up to 700 N/mm ²												
Steels 800-1000 N/mm ²												
Steels >1400 N/mm ²												
Tool steels >45-55 Hrc												
Tool steels >55-60 Hrc												
Cast iron												
Martensitic stainless steels												
Austenitic stainless steels												
Titanium up to 900 N/mm ²												
Titanium alloys >900 N/mm ²												
Nickel alloys up to 900 N/mm ²												
Nickel alloys >1200 N/mm ²												