

THERMAL SPRAY FLEXICORD

Technical Bulletin

MAGNESIUM ZIRCONATE

Ceramic series – ref : 98211 6147 000

MAGNESIUM ZIRCONATE Flexicord is designed to be sprayed with our MASTER JET® flame spray gun. MAGNESIUM ZIRCONATE is designed to provide thermal barrier properties and to reduce the wettability versus molten metals. When applied with NiCrAlY bond coat on metal substrates the coating has an excellent resistance to thermal shocks and thermal cycles. Very stable up to high temperature (1400°C).

Applications

Tools in contact with steel at high temperature, combustion chamber and boiler walls, furnace parts, pyrometer casings, oxygen lance body, casting spouts, spoons, feeder canals, crucibles for special metals casting. Thermal barrier coating.

Typical composition (%) - G^{TIP}

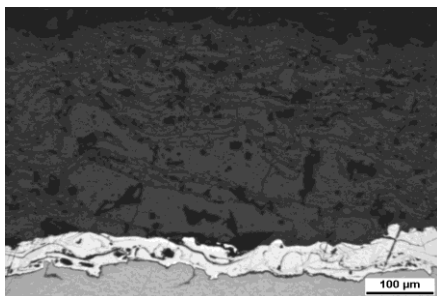
Zr ₂ O ₃	77
MgO	23

Color code

Skin	Pink
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Packaging

Ø Flexicord	4,75 mm +/- 0,1mm
Spool	Plastic - SD 300mm
Weight	5,8 Kg +/- 10%

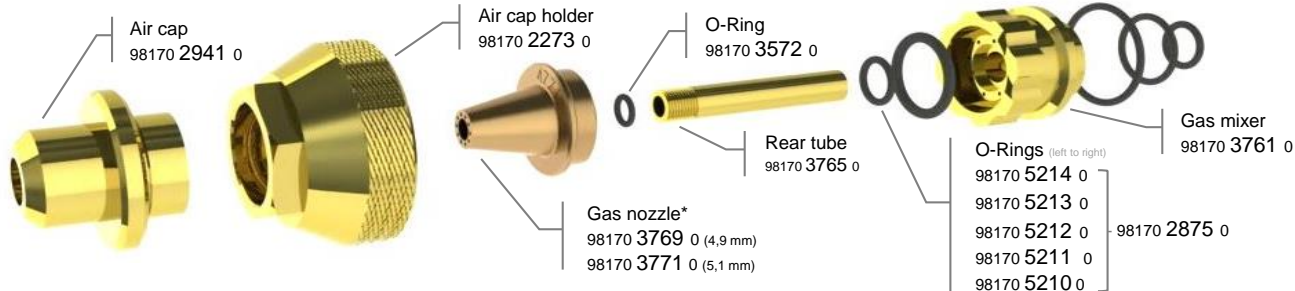


Typical microstructure of Magnesium Zirconate sprayed with our Master Jet® flame spray gun.

Coating features

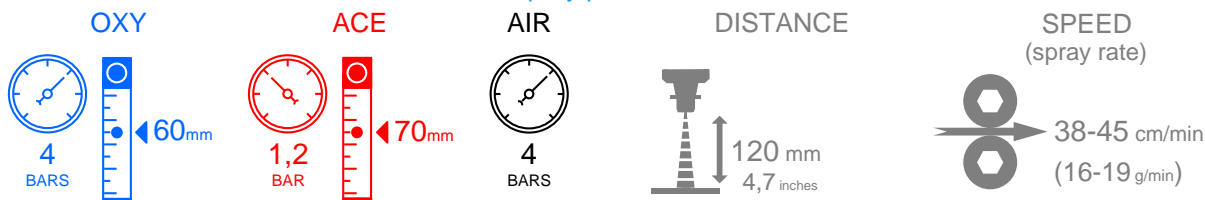
Porosity	10 - 15%
Pore diameter	1 - 10 µm
Roughness Ra (as sprayed)	> 10 µm
Typical Hardness	760 Hv ₃₀₀
Density	4,3 g/cm ³
Deposit Efficiency	65%
Thermal conductivity	0,6 W.m ⁻¹ .K ⁻¹
C.T.E.	11.10 ⁻⁶ K ⁻¹

Gun configuration



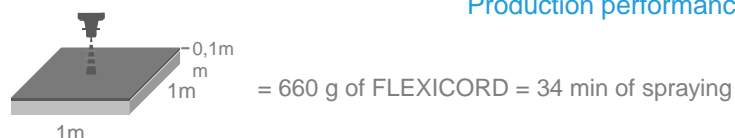
*Use 4,9 mm in dry area – 5,1 mm in wet area

Spray parameters



Master Cleaner required (ref.: 98110 3000 000)

Production performances



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