

Rokide® Rods Technical Bulletin



ROKIDE® C (Chrome Oxide) Ceramic Rod for Thermal Spraying

PROPERTIES

- Good Resistance to Mechanical Friction
- Very Good Abrasion Resistance

AVAILABLE ROD SIZES

- 989100198000 - 3/16" Diameter x 24" Length (4.75 mm x 610 mm)
- 989100208001 - 1/4" Diameter x 24" Length (6.35 mm x 610 mm)

SPRAY PARAMETERS

Acetylene	Pressure: 15 PSI	Ball Height: 60+
Oxygen	Pressure: 90 PSI	Ball Height: 90+
Air	Pressure: 80 PSI	
Standoff Distance	4 inches (10 cm)	

Rod Type	989100198000 (3/16" x 24")	989100208001 (1/4" x 24")
Nozzle	987733064000	987733213000
		987733279000
Air Cap	987733281000	987733281000
Rod Speed	5-6 in/min (13-15 cm/min)	4-5 in/min (10-13 cm/min)
Lay Down Rate	0.62 Lbs/hr (0.28 Kg/hr)	0.75 Lbs/hr (0.34 Kg/hr)
Deposit Efficiency	55%	51%

APPLICATIONS

- Pump Sleeves
- Pump Shafts
- Impellers
- Casings
- Pump End Plates
- Pistons
- Pump Stuffing Box Covers
- Mud Pump Shafts
- Mechanical Seal Faces
- Valve Stems
- Suction Box Covers
- Ball Valves
- Oil Seals
- Wire Drawing Capstans
- Wire Draw Blocks
- Sheaves
- Wire Drawing Rolls
- Guides
- Wire Pulleys
- Heat Seal Bars
- Heat Seal Jaws

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PACKAGING

Rod Type	989100198000 (3/16" x 24")	989100208001 (1/4" x 24")
Rods Packaged in tubes	100 rods	100 rods
(3) Tubes per Cardboard Box	300 rods	300 rods
Bulk shipment - Rocon Drum	2,500 rods	1,600 Rods
Tube weight	8 Lbs. (3.6 Kg)	14 Lbs. (6.3 Kg)

COATING FEATURES

PHYSICAL	
Color	Black
Total porosity	8.4%
Bulk Density	4.5 g/cc
Crystal Phase	Eskolaite

TYPICAL CHEMICAL COMPOSITION (%)

Cr ₂ O ₃	90.33
SiO ₂	5.62
Al ₂ O ₃	3.67
Fe ₂ O ₃	0.27
MgO	0.11

MECHANICAL	
Coating Hardness	1215 (Vickers/DPH)
Bond Strength	4545 psi
Sand Blast Penetration	0.0016 Depth/mm
Falex Wear test	3.3 mm ³ /KMS

THERMAL	
Coefficient of Expansion	5.0 x 10 ⁻⁶ from 70° - 2000° F (in/in/°F)
Melt Temperature	3000° F
Conductivity	18 (est) BTU/Hr/ft ² (1000 - 2000° F)
Total Emittance	0.8 - 0.9 (100 - 1200° C)

ELECTRICAL	
Conductivity	Nonconductor

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