

Saint-Gobain Coating Solutions

Technical Bulletin

ROKIDE® A (Aluminum Oxide) **Ceramic Rod for Thermal Spraying**

Properties

- Good Electrical Insulator
- Very Good Abrasion Resistance
- Good Thermal Shock Resistance

Available Rod Sizes

- 910.0190.A - 3/16" Diameter x 24" (4.75mm x 610mm)
- 910.0200.A - 1/4" Diameter x 24" (6.35mm x 610mm)

Spraying Conditions

- 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

	910.0190.A (3/16" x 24")	910.0200.A (1/4" x 24")
Nozzle	773.3064.B	773.3213.B or 773.3279.B
Air Cap	773.3281.B	773.3281.B
Rod Speed:	7-8 in/min (18-20 cm/min)	6-7 in/min (15-18 cm/min)
Lay Down Rate	1.2 Lbs/hr (0.55 Kg/hr)	1.6 Lbs/hr (0.73 Kg/hr)
Deposit Efficiency	79%	73%



TYPICAL CHEMICAL COMPOSITION (%)

Al ₂ O ₃	98.38
SiO ₂	0.78
TiO ₂	0.01
CaO	0.14
NaO ²	0.30
Fe ₂ O ₃	0.05
MgO	0.34

APPLICATIONS:

Graphite Furnace Trays
Mechanical Seal Faces
High Pressure Spacers
Entry Guide Vanes
Armature Shafts (Hand Tools)
Extrusion Die Plates (Plastic)
Induction Heating Coils
Induction Welding Fixtures
Radomes
Thermowell Tubes
Platinum Spinnerets
Ceramic Furnace Cores
Furnace Hearth Plates
Ceramic Furnace Trays


SAINT-GOBAIN

COATING SOLUTIONS

Packaging

<u>Rod Type</u>	<u>910.0190.A</u> (3/16" x 24")	<u>910.0200.A</u> (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:	7 Lbs. (3.2 Kg)	12 Lbs. (5.4 Kg)

Coating Features

PHYSICAL

Color:	White
Total porosity:	12%
Bulk Density:	3.2 g/cc
Crystal Phase:	Gamma Alumina

MECHANICAL

Coating Hardness:	772 (Vickers/DPH)
Bond Strength:	3,374 psi
Sand Blast Penetration:	0.02265 Depth/mm
Falex Weartest:	47.9 mm ³ /KMS

THERMAL

Coefficient of Expansion:	4.1 x 10 ⁻⁶ from 70° - 2250° F (in/in/°F)
Melt Temperature:	3600° F
Conductivity:	19 BTU/Hr/ft ² (1000 – 2000° F)
Total Emittance:	0.8 - 0.4 (200 – 1000° C)

ELECTRICAL

Conductivity:	Nonconductor
Electrical Resistivity:	4.5 x 10 ⁶ at 500°F (OHM – In)
Dielectric Strength:	(AC Volts/mil Thk.) 0.005" Thk. -160 0.010" Thk. -120 0.020" Thk. – 65 0.030" Thk. – 48+
Dielectric Constant:	10 at 0-600°F
Dissipation Factor:	0.05 at 0-600°F
Loss Factor:	0.5

The information contained in this document is believed to be accurate and reliable but is presented without guarantee or warranty on the part of Saint-Gobain Ceramic Materials. Further, nothing present herein should be interpreted as an authorization or inducement to practice any patented invention without an appropriate license.

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