

**INDUSTRY**  
Powder Metal

**PRODUCT**  
ROKIDE®

**MATERIAL**  
ROKIDE® "A"  
Aluminum Oxide  
Ceramic Spray Rods

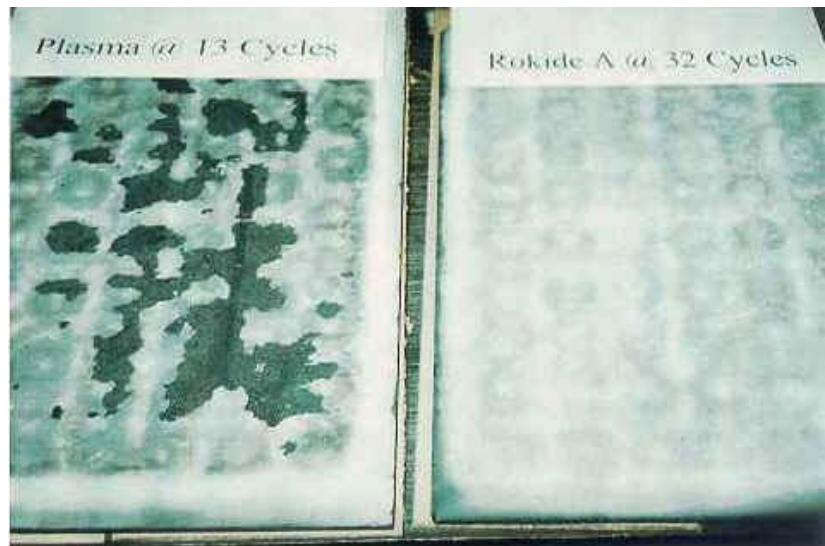
## ROKIDE® IN THE POWDER METAL

### Reaction Barrier Coating on Extruded Graphite Plates

In certain powder metal sintering environments, usually above 2050°F (1121°C) with various combinations of Hydrogen/Nitrogen atmospheres, uncoated graphite sintering trays can react with the powder metal parts. As a result the melting point of the parts is lowered and the structure is compromised. In extreme cases, the powder metal parts can actually melt down completely and/or can become fused to the untreated plates. The ultimate result is scrap parts!

### The Coatings Solution

By applying a thin coating, approximately .008" - .010" (.2mm - .25mm) of ROKIDE "A" (Aluminum Oxide) a reaction barrier can be established.



This coating acts as a buffer between the graphite plate and the powder metal part and prevents the carbon infiltration from occurring. When properly applied, the ROKIDE "A" coating also helps in maintaining the flatness of some parts and significantly extends the life of the graphite sintering board.

This protection becomes more critical as sintering temperatures increase. ROKIDE "A" is being used successfully at several major players in the Powder Metal Industry in temperatures up to 2300°F (1260°C).

After several years of use at a prominent Powder Metal manufacturer in Western Pennsylvania, ROKIDE "A" has consistently afforded them premium protection and increased life of their plates to over 3 months.

Extensive testing at a North Carolina producer revealed that graphite trays coated with ROKIDE "A" out performed and out lasted Plasma sprayed (Aluminum Oxide) plates 3 to 1 (see picture above). ROKIDE is also superior to most "paint on" types of coating materials.



The automotive and many other industries continue to demand higher sintering temperatures to achieve higher densities for many of their critical parts. ROKIDE is helping the powder metal manufacturers meet this challenge.

	INITIAL COST (US\$)	ESTIMATED LIFE-TIME (YEAR)	COST PER YEAR (US\$)	ADDITIONAL COSTS TO INSPECT AND RE-PAIR OVER LIFETIME	TOTAL SAVINGS OVER LIFETIME (US\$)
<b>Current Material</b>	<b>\$27/Plate</b>	<b>13 cycles</b>			
<b>Rokide Material</b>	<b>\$30/Plate</b>	<b>32 cycles</b>			<b>\$54/cycle</b>

### Custom Engineered For Easy Installation

Each coatings solution is custom-designed, manufactured, and installed to meet the demands of your application and operation environment. In most cases, the solution is a direct replacement of the original and does not require any further equipment alterations.

### Quality and Experience Give You The Competitive Edge.

As part of our Coatings Solution team, SAINT-GOBAIN GRAINS AND POWDERS offers the resources, technology, and experience to solve the most complex wear problems.

### Providing Global Solutions To Your Wear Problems Solutions

Our companies are solution-oriented. We assess your problem, present realistic options, and engineer wear systems that are appropriate for your operating environment. Our expertise in material science, our computer design technology, our unique shaping capabilities, and our expertise in attachment techniques give us the technical edge when it comes to solving wear problems. No matter where you are in the world, our full line of products and technical support are as close as your nearest Coatings Solution representative. Our sales offices are located throughout Europe, North and South America, Asia, India and Australia.

#### Materials

- Thermal Spray Powders
- Rokide Rods
- Flexible Cord
- TUF COTE
- Hardfacing Powders
- Anticorrosion wires

#### Equipment

- Rokide Ceramic Spray Systems
- Master-jet Spray Equipment

#### Applications

- Powdered Metal Reaction Barriers
- Mechanical Parts
- Wire Drawing Capstans
- Pumps, Valves
- Thermal Barrier for Power Generation
- Anti-Corrosion Coatings

#### Market Served

- Powdered Metal
- Petrochemical
- Wire Manufacturing
- Aerospace
- Hot Metal Extrusion
- Land Based Gas Turbine
- Pulp & Paper Manufacturing
- Chemical Processing
- Environmental Industries
- Glass bottle manufacturing

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