



Alumina-Zirconia Composite Powder

MetaCeram®

25088



- Great resistance to abrasion and erosion
- Excellent thermal barrier properties
- Precise particle sizing ensures coating consistency

MetaCeram® 25088

Eutectic's MetaCeram 25088 is a proprietary alumina-zirconia composite powder designed for use with high energy combustion or conventional plasma thermal spray equipment. The coatings produced exhibit excellent thermal barrier properties coupled with a high degree of resistance to abrasion and erosion. Coatings of 25088 will outperform traditional thermal barrier coatings such as calcia-stabilized zirconia or magnesium zirconate. In addition, coatings of 25088 are resistant to attack from most molten metals including cast iron, alloy steels, aluminum and zinc.

Metaceram 25040 will require a bond coat.

TECHNICAL DATA

Typical Coating Properties	
Hardness:	Rockwell 15N Scale, 88
Thickness Limit:	> 0.050 inches
Max. Service Temperature:	1800°F (982°C)
Porosity:	< 5%
Recommended Bond Coat:	ProXon 21031 @ .003" - 0.05"
Typical Powder Properties	
Flow Rate:	12 seconds
Bulk Density:	1.35 g/cc
Powder Coverage:	0.029 lb/ft ² @ 0.001"

PROCEDURE FOR USE

Finishing Procedure: Coatings of MetaCeram 25050 should be rough ground with 120 grit silicon carbide or 150 grit diamond wheels. Finish grind using a 400 grit diamond wheel.

Recommended Parameters

TD 2000*

Nozzle:	RL 210 or RL 210-W
RotoJet:	RPA 3@40psi air
Module Adaptor:	Aqua
Oxygen:	50 psi / 35 flow (FM-1 flowmeter)
Acetylene:	12 psi / 75 flow (FM-1 flowmeter)
T-Valve Setting:	4 - 6 clicks
Coating Rate:	3 lb/hr
Spray Distance:	5 to 7 inches

CDS 8000*

Nozzle:	SSm 30
Powder Module:	1 - 2
Compressed Air:	40 - 45 psi
Rotational Speed:	60 m/min (200 sfpm)
Advance:	0.125 in/rev
Spray Distance:	3 - 3.5 inches

**Pre-heat of 300°F (150°C) minimum must be maintained at all times until final build-up is reached. A maximum temperature of 500°F (260°C) should not be exceeded during the build-up.*

TYPICAL APPLICATIONS

- Smelt Spouts
- Pouring Troughs
- Heat Treat Fixtures
- Molten Aluminum Troughs
- Zinc Galvanizing Tanks
- Missile Nose Cones
- Tuyeres
- Ingot Molds

Observe normal spraying practices, respiratory protection and proper air flow pattern advised. For general spray practices, see AWS Publications AWS C2. 1-73, "Recommended Safe Practices for Thermal Spraying and AWS T5S-85, "Thermal Spraying, Practice, Theory and Application." Thermal spraying is a completely safe process when performed in accordance with proper safety measures. Become familiar with local safety regulations before starting spray operations. DO NOT operate your spraying equipment or use the spray material supplied, before you have thoroughly read the equipment instruction manual. Refer to the Eutectic website for Material Safety Data Sheet (MSDS) information. DISREGARDING THESE INSTRUCTIONS MAY BE HAZARDOUS TO YOUR HEALTH.



Eutectic Corporation:
N94 W14355 Garwin Mace Dr.
Menomonee Falls WI, 53051 USA
+1 800. 558. 8524 • eutectic.com

Eutectic Canada:
428, rue Aimé-Vincent Vaudreuil-Dorion,
Québec J7V 5V5 Canada
+1 800. 361. 9439 • eutectic.ca



Follow Us On...

