

An Atomized Titanium Dioxide Alloy

# MetaCeram<sup>®</sup> 25040

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- Two-step "Cold Process" powder
- Excellent resistance to abrasion, cavitation and corrosion
- Offers a low coefficient of friction with most mating surfaces
- Precise particle sizing ensures coating consistancy

# MetaCeram<sup>®</sup> 25040

25040 is titanium dioxide (TiO2) powder which is designed for use with high energy combustion thermal spray equipment like the TeroDyn<sup>®</sup> 2000 or conventional plasma spray processes. The coatings produced are hard, dense, exhibit excellent resistance to wear caused by abrasive particles and offer a low coefficient of friction with most mating surfaces.

Metaceram 25040 will require a bond coating in n early all applications. Use Proxon 50000 or 21031.

# **TECHNICAL DATA**

## **Typical Coating Properties**

Macrohardness:	Rockwell 15N Scale, 88
Density:	3.7 g/cc
Max. Service Temperature:	1000°F (538°C)
Microhardness:	DPH <sub>300g</sub> 800
Typical Powder Properties	
Flow Rate:	12 seconds
Bulk Density:	1.8 g/cc
Powder Coverage:	0.021 lb/ ft <sup>2</sup> @ 0.001"
Melting Point:	3340°F (1806°C)

# PROCEDURE

## **FOR USE**

Finishing Procedure: Coatings of MetaCeram 25040 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: RotoJet: Module Adaptor: Oxygen: Acetylene: T-Valve Setting: Coating Rate: Deposit Efficiency: . Spray Distance:

50

85%

of 500°F ( $260^{\circ}$ C) should not be exceeded during the build-up.

RL 210 or RL 210-W RPA 3@40psi air Aqua 50 psi / 35 flow (FM-1 flowmeter) 12 psi / 75 flow (FM-1 flowmeter) 6 clicks 3 lb/hr . 90% 4 to 6 inches

### TD 3000\*

Nozzle: Terometer: Oxygen: Acetylene: Carrier Gas: Coating Rate: Deposit Efficiency: Spray Distance:

#### CDS 8000

Nozzle-Powder Module: Compressed Air: Rotational Speed: Advance. Spray Distance:

3 to 4 inches SSm 30 1-2 40 - 45 psi 130 sfpm 0.2 in/rev

RL 210 or RL 210 W

50 psi / 38 flow

12 psi / 62 flow

2.5 lb/hr

Ni or Ar @ 55 psi

4 inches \*Pre-heat of 300°F (150°C) minimum must be maintained at all times until final build-up is reached. A maximum temperature

TYPICAL APPLICATIONS • Ship Screws

- Impellers
- Turbine Blades
- Pump Sleeves

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 TSS-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.



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