

Tungsten Carbide-Cobalt and Nickel Alloy Blended Powder

# Eutectic<sup>®</sup> 29123



## COATING

- Ideal for boiler coal chutes and induced draft fan blades
- Designed to resist to fine particle abrasion and erosion
- Suited for use with cold spray and non transferred arc processes



## DESCRIPTION:

Eutectic 29123 is a blend of agglomerated tungsten carbide/cobalt and atomized Nickel alloy powder. It has been specifically designed to provide resistance to fine particle abrasion and erosion. Coatings of 29123 are ideally suited for utility boiler coal chutes and induced draft fan blades. The TeroDyn® 2000, TeroDyn® 3000, CDS8000 Systems as well as Non-transferred Plasma Arc can be used to apply 29123 powder. A bond coat is required to ensure good adhesion to the base metal. Eutectic 21021, 21031 or 18995 are the alloys preferred for bond coating in most applications.

## TECHNICAL DATA:

### Coating Properties:

Macro-Hardness: Rockwell C scale 50

Micro-Hardness of Carbide: Rockwell C scale 75

Density: 11 g/cc (TeroDyn Systems)

11.3 g/cc (Plasma Systems)

Maximum Service Temperature: 1200°F (649°C)

### Powder Properties:

Hall Flow Rate: 12.9 seconds

Bulk Density: 5.2 g/cc

Powder Coverage: 0.071 lbs/ ft<sup>2</sup> @ 0.001"

## FINISHING PROCEDURES:

Use of Eutectic 29123 in the as-sprayed condition is recommended. If finishing is necessary, please use the following guidelines...

Grinding Wheel Type: Green Silicon Carbide

Grit Size: 60 - 80

Grade.: H (soft)

Structure: 5

Bond Type: Vitrified

Wheel Speed: Use Manufacturer's Recommendation

Work Speed: 50 - 65 surface feet per minute

Traverse Speed

Roughing: 5-15 inches per minute

Finishing: 3-8 inches per minute

In-Feed

Roughing: 0.001 inches per pass

Finishing: 0.0005 inches per pass or less

Coolant: Flood coolant with rust inhibitors in 2-5% concentration

Notes:

1. Before grinding, all edges and ends of coating must be chamfer ground.

2. Frequently dress the grinding wheel face to reduce friction and heat.

## APPLICATIONS:

- Fan Blades
- Coal Chutes
- Pump Housings
- Polishing Fixtures
- Drilling Fixtures
- Grain Chutes

## RECOMMENDED COATING AND SPRAY PARAMETERS:

TD 2000		TD 3000		CDS 8000	
Nozzle	RL 210	Nozzle	RL 210w	Oxygen 4 bar	60 psi
RotoJet	RPA-1@50 psi	RotoJet	RPA-3@30 psi	Acetylene 0.7 bar	10 psi
Module Adaptor	Yellow/Red	Oxygen	50 psi / 34 flow	Air 0.7 bar	10 psi
Oxygen*	50 psi / 38 flow	Acetylene	12 psi / 54 flow	Flame Setting	Neutral
Acetylene	12 psi / 60 Flow	Coating Rate	7 lbs/hr	Module Adaptor	4
Coating Rate	8 lbs/hr	Carrier Flow	40	Vc Rotation	65 SFPM
Spray Distance	3-4 inches	Terometer	105	Advanced in Rev	0.1
Coating Efficiency	85%	Spray Distance	6-8 inches	Spray Distance	8 inches
		Coating Efficiency	80%		

\* FM-1 flowmeter

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