

High Performance, Fusible Nickel-Alloy Powder

Eutectic® 23065



COATING

- Extremely durable coatings used where hardness and corrosion resistance are of prime importance
- “Hot Process” spray and fuse powder for steels and stainless steels
- Precise particle sizing ensures coating consistency in deposition, fusing and hardness



DESCRIPTION:

Eutectic 23065 is an atomized, high performance alloy powder optimized for use with the TeroDyn® System 2000 or System 3000. It is a hot process spray and fuse powder primarily for use on steels and stainless steels where hardness and corrosion resistance are of prime importance. Eutectic 23065 contains alloying additions of molybdenum and copper which increase the plastic range during fusing and increase resistance to pitting in corrosive environments. Eutectic 23065 fused coatings are hard, dense and corrosion resistant.

TECHNICAL DATA:

Powder Properties:

Hall flow rate: 18 seconds
Bulk density: 3.9 g/cc
Powder coverage: 0.042 lbs/ft² @ 0.001"
Approx. melting range: Solidus: 1850°F (1010°C)
Liquidus: 2120°F (1160°C)
Furnace Fusing: 2150°F (1177°C)

Coating Properties:

Typical macro-hardness: Rockwell C Scale, 60
Typical hot hardness: Hardness is maintained to about 800°F after which it drops off at about 2.5% per 100°F
Shrinking on fusing: 17-20%
Typical density: 7.6 g/cc
ASTM G-65 Schedule A volume loss: 27.2mm³
Approx. thermal expansion: 200°-1000°F: $7.5 \times 10^{-6}/^{\circ}\text{F}$
1000°-1400°F: $7.8 \times 10^{-6}/^{\circ}\text{F}$
1400°-1800°F: $9.0 \times 10^{-6}/^{\circ}\text{F}$

PROCEDURE FOR USE:

Finishing Procedure:
Grinding Wheel Type: Green Silicon Carbide
Grit Size: 60 - 80
Grade: H (soft)
Structure: 5
Bond Type: Vitriified
Wheel Speed: Use Manufacturer's Recommendation
Work Speed: 50-65 surface feet per minute
Coolant: Flood coolant with rust inhibitors in 2-5% concentration

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

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.

TYPICAL APPLICATIONS:

- Boiler feed pumps
- Track rollers
- Valve gates
- Shredder knives
- Valve housings
- Plug valves
- Control gate valves
- Dies
- Turning discs
- Fly ash fans
- Arbor plates
- Feed screws
- Steam valves
- Coal pulverizer chutes
- Conveyor chute plates
- Pump housings
- Rope sheave guides
- Augers
- Guides pins
- Pick boxes
- Pugmill knives

RECOMMENDED COATING & SPRAY PARAMETERS:

TD 2000	
Nozzle	RL 200
Rotojet	RPA 3@ 15 psi air
Module Adaptor	Yellow/Red
Oxygen	50 psi / 30 flow (FM-1 flowmeter)
Acetylene	12 psi / 60 flow (FM-1 flowmeter)
T-Valve Setting	25 clicks
Coating Rate	25 lbs/hr
Deposit Efficiency	90%
Spray Distance	7-9 inches

TD 3000	
Nozzle	RL 200
Oxygen	50 psi / 32 flow (3110 flow meter)
Acetylene	12 psi / 48 flow (3110 flow meter)
Carrier Gas	Nitrogen @55 psi
Terometer	130
Coating Rate	20 lbs/hr
Deposit Efficiency	90%
Spray Distance	7-9 inches

YOUR RESOURCE FOR PROTECTION, REPAIR AND JOINING SOLUTIONS



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