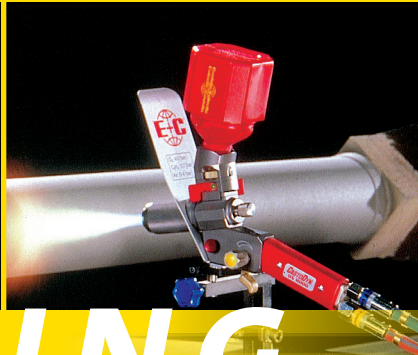


A Nickel-Molybdenum, Low Alloy Steel Powder

Eutectic® 19666



COATING

- High compressive strength
- Excellent build-up capabilities
- Good machinability
- Designed to work with thermal spray and non-transferred arc plasma applications



DESCRIPTION:

Eutectic 19666 is a nickel-molybdenum low alloy steel powder suitable for use with the TeroDyn 2000, TeroDyn 3000 and conventional non-transferred arc plasma systems.

Eutectic 19666 is a moderately hard powder that is economical to apply as a thick deposit on both outside diameter and inside diameter applications. As a result, coatings of 19666 are well suited for a broad range of reclamation applications.

Eutectic 19666 is suitable for use as a single coating or as a build-up material. In all cases, a suitable bond coating such as UltraBond 50000 or ProXon 21021 or ProXon 21031 should be applied. Coatings of 19666 can be readily machined with conventional carbide tooling.

TECHNICAL DATA:

Coating Properties:

Typical Macrohardness: HRB 98
Coating Density: 7.50 g/cc (0.271 lb/inch³)
Porosity: 3% - 5%
Bond Strength: >3,000 psi (21021 bond layer)
Max Service Temp: 800°F (427°C)
Shrinkage: Low
Finish: Machine with carbide Tooling

Powder Properties:

Chemistry: Low Alloy Steel with additions of Nickel and Molybdenum
Apparent Density: 2.9 g/cc
Hall Flow: 26 seconds / 50 grams
Melting Point: Approximately 2500°F (1373°C)

RECOMMENDED COATING AND SPRAY PARAMETERS:

**** Requires a Bond Coat of UltraBond 50000 ****

TD 2000	
Nozzle	RL 200
RotoJet	RPA-3@ 30 psi air
Module Adaptor	Yellow/Red
Oxygen	50 psi / 35 flow
Acetylene	12 psi / 75 flow
T-Valve Setting	16-18 clicks
Coating Rate	16 lbs/hr
Deposit Efficiency	95%

TD 3000	
Nozzle	RL 210 or RL 210W
RotoJet	RPA-3@25 psi air
Oxygen	50 psi / 36 flow
Acetylene	12 psi / 60 flow
Terometer	150
Coating Rate	20 lbs/hr
Spray Distance	8-10 inches
Carrier Gas	Nitrogen @ 55psi & 40 flow

PROCEDURE FOR USE:

Single Point Turning
(Do Not use coolant unless coating is sealed)

Tool: Carbide, ISO K01

Rake Angle: -5°

Turning Speed: 100 SFPM

Cross Feed: 0.002-0.007 inch/rev

In Feed:

Roughing: 0.01-0.04 inch

Finishing: 0.002-0.005 inch

Grinding

(Do Not use coolant unless coating is sealed)

Wheel Specification: 11 C 80 F 13 V Pmf (for 16" wheel)

Wheel Speed: 5000 - 6000 RPM

Cross Feed

Roughing: 75% of the wheel width per revolution of work piece

Finishing: 12.5% of the wheel width per revolution of workpiece.

In Feed roughing: generally less than 0.005"; operator experience should guide this operation.

Finishing: should never exceed 0.001" to 0.002" inch.

Coolant: Coating should be sealed so that coolant can be used.

TYPICAL APPLICATIONS:

- Pump Impellers
- Starter Motor Shafts
- Guides
- Journals
- Cushion Layer / Build-Up Coating

YOUR RESOURCE FOR PROTECTION, REPAIR AND JOINING SOLUTIONS



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