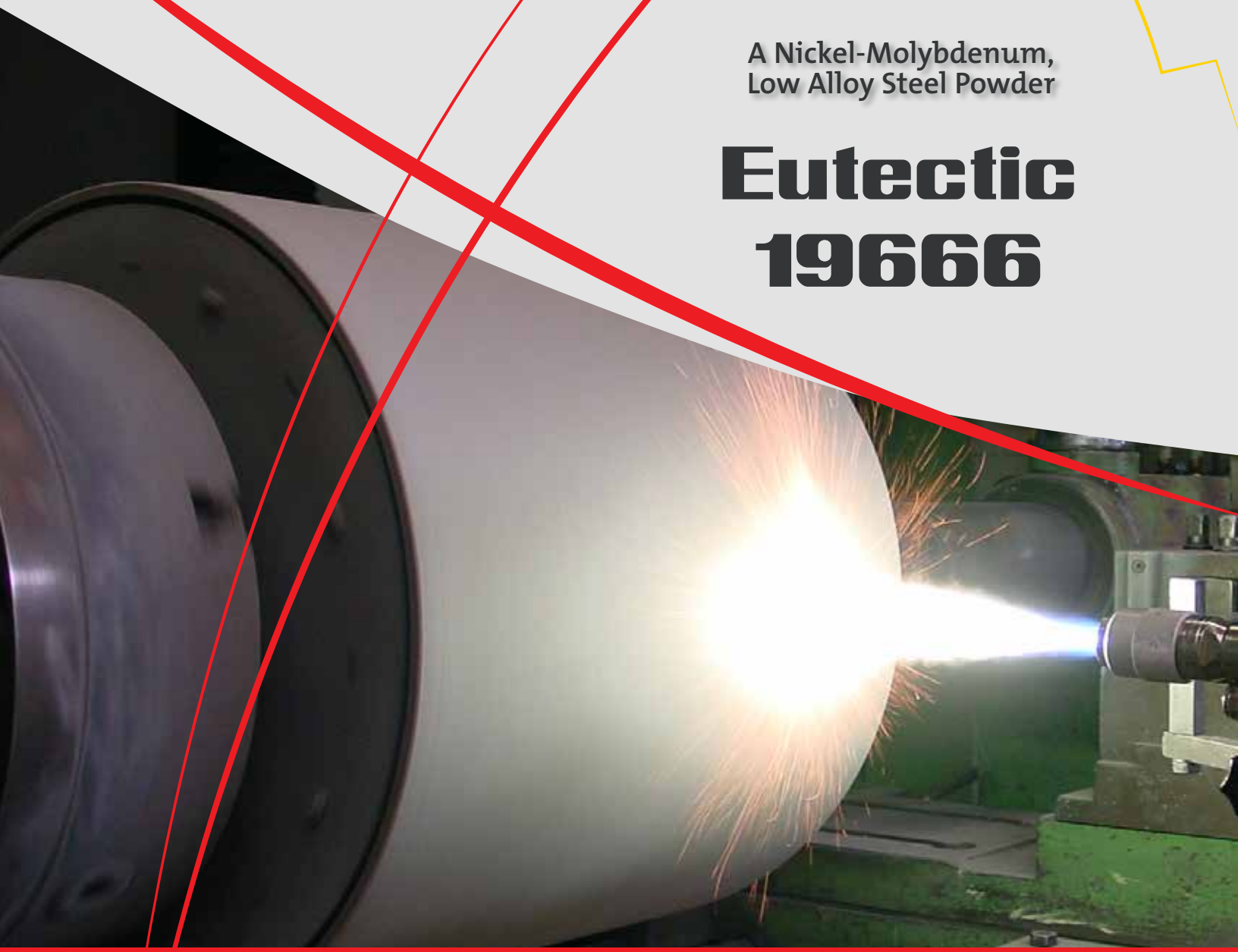
Castolin Eutectic®
Eutectic Castolin

A Nickel-Molybdenum,
Low Alloy Steel Powder

Eutectic 19666



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

Eutectic 19666

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, ProXon 21021 or ProXon 21031 should be applied. Coatings of 19666 can be readily machined with conventional carbide tooling.

TECHNICAL DATA

Typical Values	
Typical Macrohardness:	98 HRB
Coating Density:	7.50 g/cc (0.271 lb/inch^3)
Porosity:	3% - 5%
Bond Strength:	>3000 psi (21021 bond layer)
Max Service Temperature:	800°F (427°C)
Shrinkage:	Low
Finish:	Machine with carbide Tooling
Apparent Density:	2.9 g/cc
Hall Flow:	26 sec/50 gr
Melting Point:	≈ 2500°F (1373°C)

Chemistry:
Low Alloy Steel with additions of Nickel and Molybdenum

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.

Coating & 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 lb/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

TYPICAL APPLICATIONS

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

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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