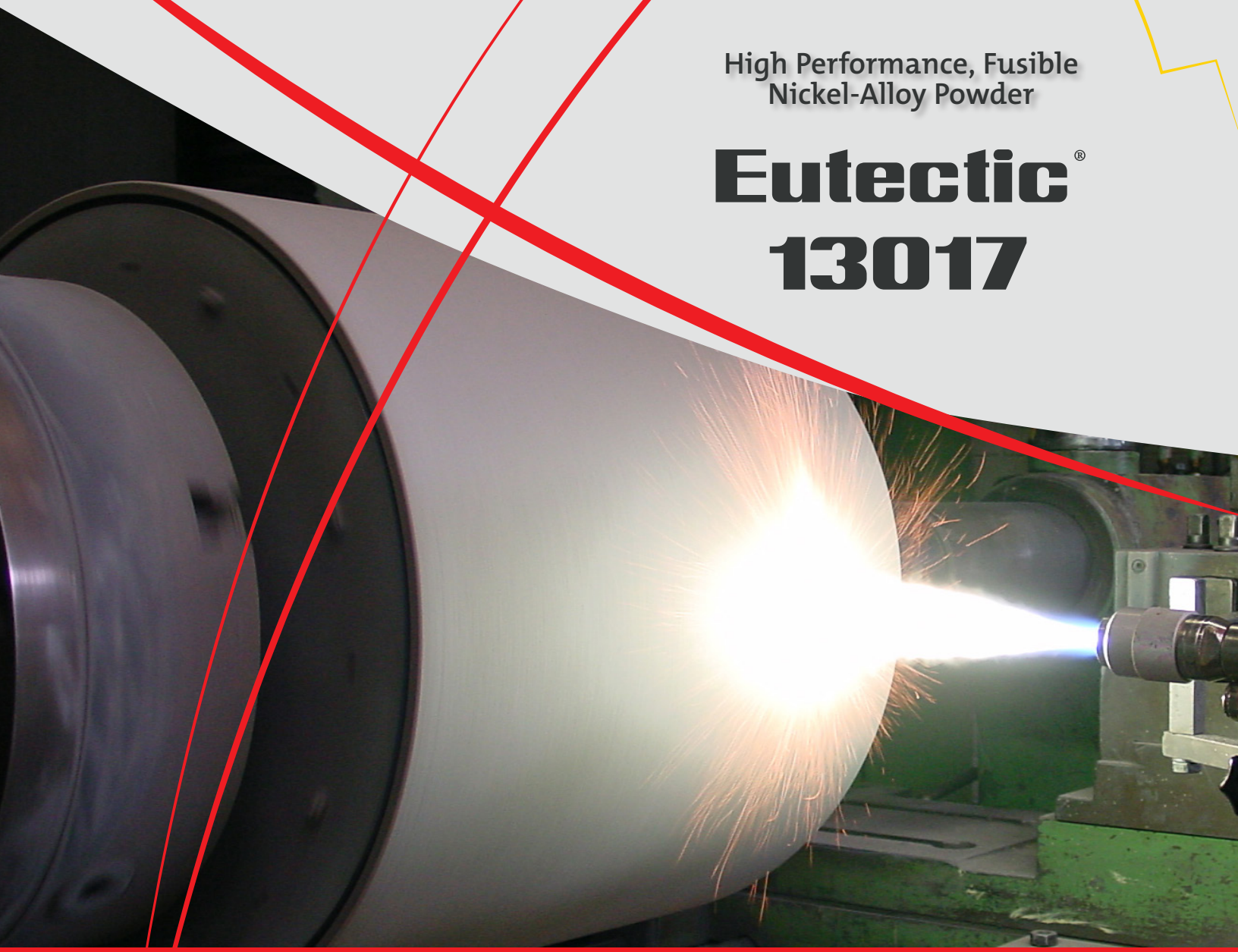
Castolin Eutectic®
Eutectic Castolin

High Performance, Fusible
Nickel-Alloy Powder

Eutectic® 13017



- 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 consistancy

Eutectic® 13017

Eutectic 13017 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 13017 contains alloying additions of molybdenum and copper which increase the plastic range during fusing and increase resistance to pitting in corrosive environments. Eutectic 13017 fused coatings are hard, dense and corrosion resistant.

TECHNICAL DATA

Typical Powder Properties	
Melting Range:	Solidus: 1750°F (954°C)
	Liquidus: 1950°F (1065°C)
	Furnace Fusing: 2170°F (1188°C)
Hall Flow Rate:	18 seconds
Bulk Density:	4.0 g/cc
Powder Coverage:	0.042 lbs/ft² @ 0.001“

Typical Coating Properties	
Marco Hardness:	60 HRC
Hot Hardness:	Hardness is maintained to about 800°F after which it drops off at about 2.5% per 100°F
Shrinkage on Fusing:	17-20%
Density:	7.6 g/cc
Wear Resistance: (ASTM G-65 Schedule A volume loss)	27.2 mm^3
Thermal Expansion:	200°F - 1000°F: 7.5x$^{10-6}$/°F
	1000°F - 1400°F: 7.8x$^{10-6}$/°F
	1400°F - 1800°F: 9.0x$^{10-6}$/°F

PROCEDURE FOR USE

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

	Traverse Speed	In-Feed
Roughing	5-15 inches per minute	0.001 inches per pass
Finishing	3-8 inches per minute	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.

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:	25.0 lb/hr
Deposit Efficiency:	90%
Spray Distance:	7 to 9 inches

TD 3000

Nozzle:	RL 200
Oxygen:	50 psi / 32 flow
Acetylene:	12 psi / 48 flow
Carrier Gas:	Nitrogen @ 55 psi
Terometer:	130
Coating Rate:	20 lb/hr
Spray Distance:	7 to 9 inches
Deposit Effic.:	90%

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

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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