



A High Carbon Steel Wire
Made Exclusively for the
Twin Wire Arc Spray Process

EuTronic® Arc

538 Wire



- Excellent for coatings in excess of 0.030" of thickness
- Excellent resistance to mild abrasion in lubricated service
- Coatings exhibit low shrinkage
- Provides good color match to cast iron

EuTronic® Arc 538AS

EuTronic Arc 538 is a manganese compensated, high carbon steel wire specifically designed for the twin wire arc process. The coatings produced are dense, well bonded, have excellent resistance to mild abrasion and exhibit low shrinkage. EuTronic Arc 538 is an economical choice for applications requiring coatings in excess of 0.030 inches thick. Coatings can be finished by machining with carbide tools or by grinding.

EuTronic Arc 538 is one of the most cost effective wires for general reclamation of worn or mis-machined surfaces on shafts, press fits, bearing housings, match plates, plungers, valve stems, pistons, seal rings and pump plungers.

EuTronic Arc 538 coatings can also be used where a low shrinkage steel is required. Coatings are suitable for the reclamation of castings, casting defects (engine blocks and heads) or when a good color match with the base metal is required.

TECHNICAL DATA

Typical Values	
Typical Hardness:	23 HRC
Bond Strength:	8400 psi (grit blasted surface)
Deposit Rate:	10lb/hr/100 amps
Deposit Efficiency:	80%
Wire Coverage:	0.9 oz/ ft ² /mil (wire consumption)
Coating Density:	6.78 g/cc
Shrinkage:	0.0014 in/in
Surface Texture:	Variable (depends on spray parameters)
Melting Point:	2500°F (≈1373°C)
Wire Weight:	96 feet / lb @ 1/16 in diam.

Chemistry:

0.8% carbon steel alloy

PROCEDURE FOR USE:

Surface should be clean, white metal, with no oxides (rust), dirt, grease, or oil on the surface to be coated.

Note: It is best not to handle surfaces after cleaning.

Recommended method of preparation is to grit blast with 24 mesh aluminium oxide, rough grind, or rough machine in a lathe.

Please contact your Eutectic Surface Coatings Specialist for more information.

Spray Parameters:

Air Pressure: *50 – 60 psi
Voltage: *29-30
Amperage: *100-300
Standoff: *5-7 in. (10-15 cm)

**Parameters are typical and may vary depending on the equipment used. Contact your equipment manufacturer for optimum spray parameters.*

Availability:

25 lb per spool @ 1/16" diameter
Product Code: 538AS-16-11.34K

TYPICAL APPLICATIONS

- Shaft Repair
- Cylinder Liners
- Press Fits
- Valve Stems
- Crankshaft Bearings
- Casting Defects
- Pump Plungers
- Seal Rings

Note: EuTronic Arc 538 wire is well suited for wear applications in a lubricated service environment.

To ensure a safe work environment observe normal welding practices, provide appropriate eye, hearing, skin and respiratory protection and pay attention to air flow patterns. For general spray practices, see AWS Publications AWS C2. 1-73, "Recommended Safe Practices for Thermal Spraying" and AWS T55-85, "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 web site for Material Safety Data Sheet (MSDS) information. . DISREGARDING THESE INSTRUCTIONS MAY BE HAZARDOUS TO YOUR HEALTH.



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