Technical Data

HAI ARC SPRAY ZINC WIRE HA 902

Product Code: 10902 Revision: # 001
Technical Data Sheet Dated: 07/29/13

1. INTRODUCTION

HA 902 is a high purity zinc wire for the arc spray process. Additionally, HA 902 is the wire of choice for arc spraying film capacitors, end caps, other electronic components, and is an excellent anti-corrosion coating for general oxidation resistance.

HA 902 is designed to operate in all Arc Spray devices, such as HAI's ARCote 9140, 9140U, 9140UW, TAFA 8830/8835, 9000, 9935, and Sulzer Metco SmartArc arc spray systems.

2. CHEMICAL COMPOSITION

Table 1:

Element	Zn	TAO*
Max Weight %	99.99	0.01
Min Weight %	BAL.	--

*Designates Total All Other impurities

3. PHYSICAL PROPERTIES

3.1. Wire Physical Properties

Wire Size(s) diameter	1/16", 0.078", 1/8"	1.6 mm, 2mm, 3.2mm
Spool Size	OD 12"x 4" wide"; Bore ID 2"	Ø300x100 mm; Bore Ø50 mm
Spool Weight	25 lb. each	11.4 kg each
Length of Wire per lb. (1/16")	106 feet	14.65 m per 1 kg

3.2. Coating Physical Properties

Micro Hardness R_b	65	--
Porosity	< 2 % (as sprayed)	< 2 % (as sprayed)
Melting Point	788°F	420°C
Bond Strength	1,224 psi @ 0.02" thick	8.4 MPa @ 0.5 mm thick
Deposit Efficiency	Approx. 70-80%	Approx. 70-80%

4. SPECIFICATIONS

MIL-W-6712C

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5. USEFUL SPRAY DATA

Spray Rate	21 lbs./hour/100 amps	9.5 kgs./hour/100 amps
Coverage	0.9 oz./ft.^{2}/0.001	1.10 kg/m^2/100 microns
Coating Density	6.36 gm./cc	--
Coating Weight	0.54 lbs/ft^2/mil	--

6. Spray Parameters

Atomizing Air Pressure: Primary Air	50 PSI
Atomizing Air Pressure: Secondary Air	40 PSI
Arc Load Voltage	20 Volts
Ampere	150 Amps
Standoff Distance	3-10 inch
Transverse speed	250 inch/min
Coating thickness/Pass-mills	2-20 mils

7. APPLICATION

7.1. Service Environment

Special care is required to maintain a clean surface prior to arc spraying. Coatings sprayed with HA 902 will bond fairly well without a bond coat.

Overheating

Although the Arc spray process is considered a “Cool” process, please take special care not to overheat or burn the surface(s) of the part of component. HA 902 is a Zinc based product and dust overspray can burn and smolder.

SPECIAL SAFETY INSTRUCTIONS

Zinc based alloys are highly sensitive to air and oxygen and as such special care is required to make sure the material does not burn or smolder in the dust collector or dust collection barrels.

Please consult your local Fire & Safety Official for instructions on how to handle Zinc and Zinc based dusts.