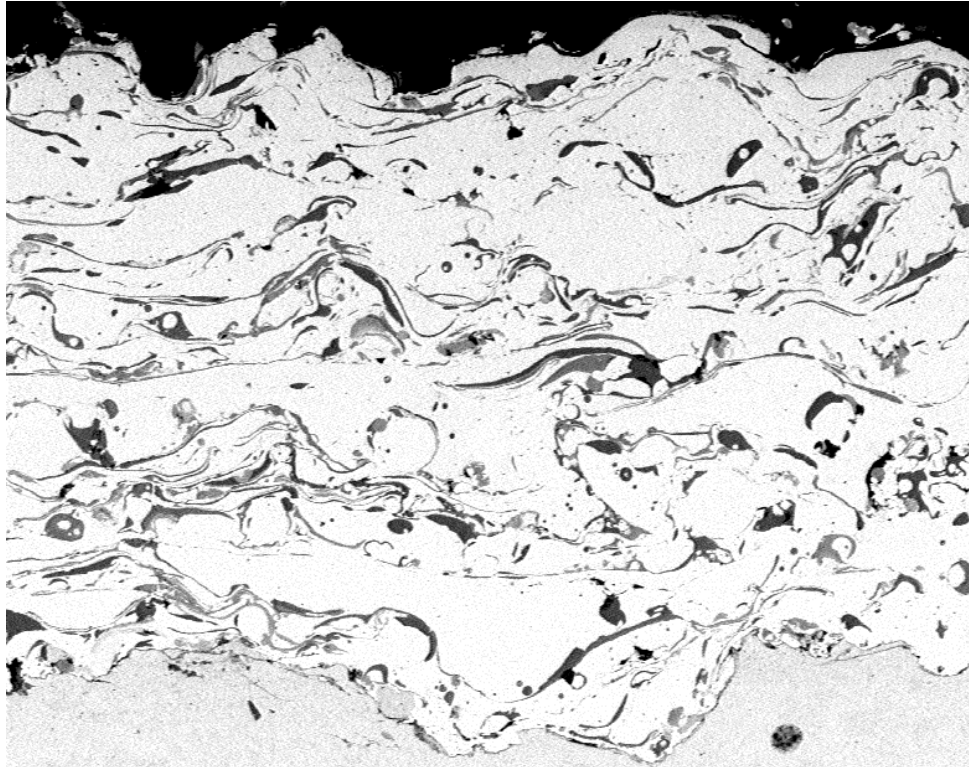


Technical Data

HAI ARC SPRAY NICKEL CHROME ALUMINUM WIRE HA 778

Product Code: 22773
 Technical Data Sheet

Revision: # 003
 Dated: 10/4/12



HA 778 Photomicrograph 500x

1. INTRODUCTION

HA 773 is a nickel chrome aluminum self-fluxing wire designed specifically for the arc spray process. HA 773 produces coatings which are highly resistant to corrosion and high temperature oxidation. HA 773 commonly used for restoration of aerospace parts and as undercoat for ceramics

HA 773 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	Ni	Al	Cr	TAO*
Max Weight %	BAL	8.50	21.00	6.00
Min Weight %	70	4.50	15.00	--

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*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")	113ft	34m

3.2. Coating Physical Properties

Micro Hardness R _b	85 – 95 HRB	
Porosity	<1.0%	
Melting Point	1250° F	677°C
Bond Strength	9500 psi @ 0.02" thick	
Deposit Efficiency	Approx. 70%	Approx. 80%

4. SPECIFICATIONS

STANDARD GRADE

5. USEFUL SPRAY DATA

Spray Rate	8.5 lbs./hour/100 amps	4.5 kg./hour/100 amps
Coverage	0.8 oz./ft. ² /0.001"	0.98 kg/m ² /100 microns
Coating Density	6.2 gm./cc	--
Coating Weight	0.034 lbs/ft ² /mil	--

6. Spray Parameters

	Metallic Substrates	
Atomizing Air Pressure: Primary Air	50 - 60 PSI	
Atomizing Air Pressure: Secondary Air	40 – 50 PSI	

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Arc Load Voltage	29 - 32 Volts	
Ampere	100-200 Amps	
Standoff Distance	3 - 8 inch	
Transverse speed	250 inch/min	
Coating thickness/Pass-mills	5 mils	

7. APPLICATION

7.1. Service Environment

Special care is required to maintain a clean surface prior to arc spraying. Coatings sprayed with HA 773 will bond fairly well without a bond coat.

7.2. 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. HA773 is a nickel chrome aluminum based product and dust overspray can burn and smolder.

SPECIAL SAFETY INSTRUCTIONS

Nickel chrome aluminum 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 nickel chrome aluminum and nickel chrome aluminum based dusts.