

## SP 80/20 NiAl

**CATEGORY** Metal spray wires

**TYPE** Composite spray wire for bond coatings equivalent to Metcoloy 405

**APPLICATIONS** SP 80/20 NiAl is widely used as a bond coat for subsequent thermal spray layers and as a one step build up material for dimensional restoration of aircraft engines.

**PROPERTIES** SP 80/20 NiAl is a cored wire specifically designed for both, arc spraying and flame spraying. It is selfbonding to most materials and requires minimal surface preparation. Bond strengths in excess of 9000 psi can be achieved on grit blasted surfaces. SP 80/20 NiAl exhibits good resistance to high temperature oxidation and abrasion, and excellent resistance to impact and bending. SP 80/20 NiAl can be machined and ground to a finish of 5 micro inches.

**CLASSIFICATION** AWS Ni80-Al20 deposit

**APPROVALS** CE approved

**WELDING POSITIONS:**



**PURE WIRE ANALYSIS**

Ni	Al
80	20

**MECHANICAL PROPERTIES**

Heat Treatment	Rp0,2 (N/mm <sup>2</sup> )	Rm (N/mm <sup>2</sup> )	A5 (%)	Impact Energy (J) ISO-V			Hardness Rockwel B
				-20°C	-40°C	-60°C	
							60-75

**SPRAY PARAMETERS / PACKING**

D (mm)	Voltage (V)	Spray parameters			Packing	
		Current (A)	distance (cm)	air pressure (bar)	spool type	kg spool
1,6	29-32	100-200	8-15	3.5-4.2	K-300	15
3,15	29-34	160-300	10-18	3.5-4.2	H-420	25

**REDRYING TEMPERATURE** not required

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