

## AI-0799SP

### Description and Applications

**AI-0799SP** is a flexible oxy-acetylene surfacing rod, combining ultra-hard spherical cast tungsten carbide particles and a special nickel, chrome, boron matrix.

The spherical cast tungsten carbide particles are produced with a new and unique patented melting process, which makes them the most wear resistant tungsten carbides available today.

The spherical cast carbides exhibit an extremely fine acicular, needle like structure (as high as 95%) and a very constant hardness yet are more ductile than crushed cast carbide or mono-crystalline carbide.

The hardness is up to 33% higher than any other carbide and bulk density is 10-20% higher.

The above features result in a product, which provides significant increases in wear resistance of the welded deposit.

The alloy is specially designed for applications involving extreme abrasion and erosion in combination with corrosion. The matrix material is highly resistant to acids, lyes and other corrosive media.

**AI-0799SP** can be overlaid onto mild steels, low alloys steels, steel castings, nickel based and stainless alloys.

**AI-0799SP** has been successfully used in the following Industries (amongst many):

INDUSTRY	APPLICATIONS
Oil Drilling	Stabilizers, Drill Collars, Pipe Joints
Brick & Tile	Augers, Mixers, Knives, Scrapers
Mining	Scrapers, Blades, Teeth
Sugar	Hammers, Knives
Dredging	Teeth, Scrapers
Cement	Pump Flights, Screws
Foundry	Sand Muller Blades, Augers
Glass	Archimedes Sand Screws

**NOTE:** Care should be taken when welding to use the lowest possible heat input consistent with good bead characteristics to avoid excessive melting of the tungsten carbide particles. Excellent weldability is one of the characteristics of this product.

### Mechanical Properties of Weldmetal

	As Welded
Matrix	56 HRc
Spherical Cast Carbide	3,300 HV (0.1)

### Available Sizes:

6.0 mm (# Standard Stock Size) & 5.0 mm diameter



**Available Carbide Sizes:**

A wide range and combination of tungsten carbide particle sizes are available, many tailored for particular applications. Please discuss your application requirements with an Alloys International Sales Representative.

**Standard Length:** 500mm. or continuous.

**Pack Size:** 5 kgs, or continuous spools of approx. 15 kg.

**Disclaimer**

All figures in this datasheet should be considered indicative only. No guarantee is made as to their accuracy.

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