



TH457 Titanium Tungsten Carbide

DESCRIPTION

TH457 is a cored wire specifically designed for arc spray systems. It is a titanium and tungsten carbide alloy in an amorphous matrix. TH457 produces a hard, abrasive and corrosion resistant coating, with a service environment of up to 1000° F. TH457 is used in a wide variety of industrial high wear applications.

TYPICAL DEPOSIT CHARACTERISTICS:

- Bond Strength 5000 psi
- Typical Hardness HRC 65
- Deposit Rate 18 lbs./hr./150-200 Amps
- Deposit Efficiency 70%
- Wire Coverage 2 sq. ft./lbs. @ 12 mils
- Surface Texture Variable
- Machinability No

SURFACE PREPARATION:

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 aluminum oxide, rough grind, or rough machine in a lathe. *Thermion recommends a 3.5 mil minimum anchor tooth profile.

APPLICATIONS:

- Boiler Tubes & Tube Shields
- Fan Blades
- Other High Wear Application

NOMINAL CHEMICAL COMPOSITION (wt. %):

WC	Cr	TiC	Ni	B	Si	Fe
26	13	6.0	6.0	2.0	1.0	Bal

RECOMMENDED SPRAY PARAMETERS:

Diameter	Air Pressure	Voltage	Amperage	Standoff
1/16" (1.6mm)	80-100 psi	28-32	100-300	4-7" (10-17cm)

Parameters are typical and may vary depending on equipment used.

STANDARD SIZES & PACKAGING:

Diameter	Packaging
1/16 (1.6mm)	25#