

## TH450 Chrome Nickel Amorphous

**DESCRIPTION**

TH450 is a cored wire specifically designed for arc spray systems. It produces an amorphous, hard, abrasive and corrosion resistant coating, with a service environment up to 1700° F. The inclusion of 2.0% aluminum in the formulation results in extremely high bond strength and particle to particle adhesion. High chrome like finishes can be obtained by typical grinding and lapping techniques. TH450 can be used in a wide variety of high wear applications, anti-skid surfacing applications and corrosive environments.

**TYPICAL DEPOSIT CHARACTERISTICS:**

- Bond Strength                      10,000 psi
- Typical Hardness                 HRB 66-67
- Deposit Rate                        18 lbs./hr./150-200 Amps
- Deposit Efficiency                 80%
- Wire Coverage                     2 sq. ft./lbs. @ 12 mils
- Surface Texture                    Variable
- Machinability                      Good

**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
- Cement Slurry, Chutes
- Fracking Sleeves/ Impellers
- Chutes, Troughs, Augers, Ducts, Coal Piping

**NOMINAL CHEMICAL COMPOSITION (wt. %):**

Cr	Nb	B	Ni	Fe	Other
30	10	4	10	Bal	<5.0

**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#