TECHNICAL BULLETIN

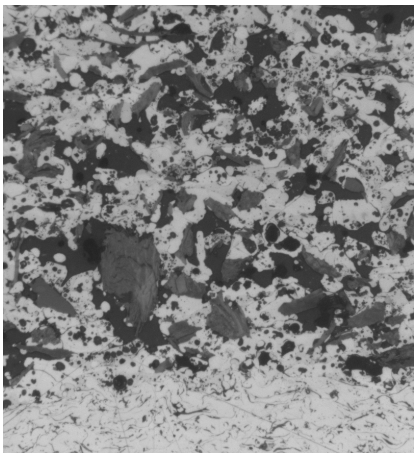
NICKEL GRAPHITE ABRADABLE CT4808-3

OVERVIEW

CT4808-3 is a nickel graphite coating designed to perform as a gas path clearance control coating toward the hotter end of the compressor in a jet engine. These coatings – sometimes in conjunction with abrasive coatings on blade tips – produce a minimum clearance seal when the blade tips incur into the coating. This can greatly improve fuel efficiency of the engine.

TYPICAL PROPERTIES

Nominal Composition:	85 Ni, 15 Graphite
Bond Strength:	12,000 psi minimum average
Coating Porosity:	Approximately 15% by volume
Coating Hardness:	R15y 50-70
As-sprayed Surface Roughness:	1,000-1,200 Ra Nominal
Service Temperature:	Up to 900°F



FOR THE FOLLOWING APPLICATIONS

CT4808-3 is used as an abradable coating in order to create very tight tolerances in the hotter area of the compressor section of gas turbine engines without the risk of potentially catastrophic contact between the rotor and stator.

FINISHING

Finish CT4808-3 by machining using a sharp pointed carbide tool using slow feeds, slow traverse and light cuts. The finished coating is a dull gray. The coating should not be shiny after machining. Coatings should be thoroughly cleaned and free from dust and debris before going into service. These coatings should never be ground.

Finishes of 400-500 Ra are typical of machined surfaces of CT4808-3.

SPECIFICATIONS

CT4808-3 meets the following specifications:

GEAE:	B50TF53 CI. B TO F50TF22

CTS-Midwest
5901 Creek Rd.
Cincinnati, OH 45242
(513) 793-0670 | F: (513) 793-4254

CTS-South
11766 NC Highway 210
Rocky Point, NC 28457
(910) 675-2909 | F: (910) 675-0806

CTS-East
80 Fadem Rd.
Springfield, NJ 07083
(973) 379-0003 | F: (973) 379-4066

CTS-Texas
4011 Chance Ln.
Rosharon, TX 77583
(281) 431-1629 | F: (281) 431-2179