

Nickel Chrome Thermal Spray Coating

EXTEC®

Δ **SIMPLICITY**

Color Guide to Materials Preparation

The natural micro structural features that include affect the Metallographic specimen preparation of nickel chrome thermal sprayed coating: porosity, thickness, delamination and inclusions. In order to maintain the true microstructure the Metallographic preparation must take into account following processing points; proper cutting/sectioning to avoid creating undue damage, the specimen is generally mounting using compression mounting resins, however very porous casting may require epoxy casting.

Hardware I

1. Extec Labcut 250B Abrasive Cutting Machine (www.extec.com/labcut250B)
 2. Extec Labpress 40 Automatic Mounting Press (www.extec.com/labpress40)
 3. Extec Labpol 12-3DI Auto Polisher/Grinder (www.extec.com/labpol12-3DI)
- or
4. Extec Labpol 12 Auto Polisher/Grinder (www.extec.com/labpol12)

Sectioning II

A rubber-resin aluminum oxide abrasive blade is preferred for ferrous hardness materials RC 60+ and always keeping the coating side in compression.

Mounting III

Compression mounting with Phenolics is typically used like our number 14505 black epoxy-mounting compounds. For porous samples a thin epoxy is preferred like our Extec Flow Epoxies.

Grinding/Polishing Method -- Nickel Chrome Thermal Spray Coating

Surface	Code	Abrasive/ Type Size	Lubricant	Code	Pressure (psi)	Time	Wheel Speed	Head Speed/ Direction
Coated Abrasive	VI	240 SiC	Water		5 psi	60 seconds	120 rpm	60rpm/Comp
Coated Abrasive	VI	320 SiC	Water		5 psi	60 seconds	120 rpm	60rpm/Contra
Coated Abrasive	VI	400 SiC	Water		5 psi	60 seconds	120 rpm	60rpm/Comp
Coated Abrasive	VI	600 SiC	Water		5 psi	60 seconds	120 rpm	60rpm/Contra
Duraplan Plano	VI	9um Diamond	Water Soluble Diamond Extender	I	5 psi	3 minutes	120 rpm	60rpm/Contra
Duraplan Plano	VII	6um Diamond	Water Soluble Diamond Extender	I	5 psi	3 minutes	120 rpm	120rpm/Comp
Optigam	VII	1um Diamond	Water Soluble Diamond Extender	I	5 psi	2 minutes	120 rpm	120rpm/Contra
Alphagam	VIII	Extec Multigam 0.05um	The last 10 seconds wash with Distilled Water		5 psi	90 seconds	120 rpm	120rpm/Contra

