

Stainless Steel

EXTEC® Δ **SIMPLICITY**

Color Guide to Materials Preparation

Stainless steels usually have easy to prepare. They are generally medium hard and are relatively soft compared to heat treatable carbon steels. Stainless Steels usually contain about 12% chromium. In most welded stainless steels the objective is to reveal the chrome carbides along the grain boundaries. This follows the ASTM spec 262 for “ditch, dual or stepped” structures.

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 medium hardness materials

Mounting III

Compression mounting with phenolics is typically used like our number 14505 black epoxy-mounting compounds.

Grinding/Polishing Method -- Stainless Steels (304, 304L, 306, 316 and 431)

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/Contra
Coated Abrasive	VI	600 SiC	Water		5 psi	60 seconds	120 rpm	60rpm/Contra
Duraplan Plano	VII	6um Diamond	Water Soluble Diamond Extender	I	5 psi	3 minutes	120 rpm	60rpm/Contra
Optigam	VII	3um Diamond	Water Soluble Diamond Extender	I	5 psi	3 minutes	120 rpm	60rpm/Contra
S-Plan	VIII	1um diamond	Water Soluble Diamond Extender	I	5 psi	2 minutes	120 rpm	120rpm/Contra
Alphagam	VIII	Multipolish 0.05um	The last 10 seconds wash with Distilled Water		5 psi	90 seconds	120 rpm	60rpm/Contra

