

# Cast Iron

**EXTEC®**      Δ      **SIMPLICITY**

## *Color Guide to Materials Preparation*

Cast Iron is only difficult because of the graphite nodules or flakes. These primary inclusions of graphite are easily damaged (fractured or puled out) during sectioning, grinding and polishing. Proper selection of using the correct abrasive, type, size and form is just as important as the machine parameters you choose.

### **Hardware** I

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

### **Sectioning** II

A rubber-resin aluminum oxide abrasive blade is preferred using a fine grit for soft ferrous materials.

### **Mounting** III

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

## Grinding/Polishing Method -- Cast Iron

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	3um Diamond	Water Soluble Diamond Extender	I	5 psi	3 minutes	120 rpm	60rpm/Contra
Optigam	VII	1um Diamond	Water Soluble Diamond Extender	I	5 psi	3 minutes	120 rpm	120rpm/Comp
Polycloth	VIII	Extec Final Polish A 0.06um	The last 10 seconds wash with Distilled Water		5 psi	90 seconds	120 rpm	120rpm/Contra

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