

## Tool-X 180

*High Performance Heavy-Duty Cutting Oil For General Machining and Thread Rolling*

### PRODUCT DESCRIPTION

**Tool-X 180** is a high performance medium viscosity neat cutting oil with added Tool-X nanotechnology for heavy-duty machining of ferrous and non-ferrous metals. **Tool-X 180** is chlorine-free and contains only trace amounts of sulfur, but has a high level of additives so it is suitable for all but the most severe EP applications. **Tool-X 180** can be used for general machining, sawing and thread rolling, and can reasonably permit product consolidation and machining flexibility.

**Tool-X 180** can deliver faster cycle times and feeds and speeds, while extending tool life, improving surface finish and dimensional accuracy on most machining applications.

### BENEFITS

#### **Base Formulation**

- Chlorine-free formulation
- High level of additives
- Excellent boundary lubrication for extended tool life
- Heavy metal-free formulation
- High temperature capable formulation
- Good EP lubricity properties

#### **Tool-X Nano-Onions**

- Increased feeds and speeds
- Better dimensional accuracy
- Improved surface finish
- Extended tool life
- Reduced chip sizes
- Lower machining costs

### APPLICATIONS

**Tool-X 180** is formulated as a general purpose high performance heavy duty cutting oil. It includes a high level of additives, as well as Tool-X nano-onions, to provide lubricity and boundary layer lubrication in extreme pressure applications. It is chlorine and heavy metal free with only trace amounts of active sulfur, so it is suitable for most metals and applications. **Tool-X 180** has proven successful in demanding thread rolling applications and for sawing molds and specialty steels.

Suitability	Cast Iron	Low-Med Alloyed Steel	High-Alloyed or Stainless Steel	Titanium Alloys	Aluminum Alloys	Yellow Metals
Thread Rolling	√√√	√√√	√√√	√√√	√√√	√
Sawing	√√√	√√√	√√√	√√√	√√√	√
Drilling	√√√	√√√	√√	√√	√√	√
Broaching/Gear Mfgr	√	√	√	√	√	
General Machining	√√√	√√√	√√√	√√√	√√√	√

## PROPERTIES

	Ester	Chlorine	Active Sulfur	Inactive Sulfur	Phosphorous	Calcium	Zinc
Additives	√	-	trace	√	-	-	-

	Appearance	Viscosity	S.G.	Flashpoint
Tool-X 180	Dark	Medium 120 SUS	0.91	310 F

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