



Machining Ultracomp Composites

TriStar's Ultracomp composite materials are machined DRY with no lubricant or cutting oils such as those used on conventional metal and woodworking machinery. The machining process is very similar to machining brass. For accurate work and long tool life we recommend the use of tungsten carbide tipped tooling although acceptable results can be achieved with high speed steel tooling.

TURNING

As a guide we have found the following tool settings ideal for turning Ultracomp.

Tool cutting angles – Top rake - 0° to 5°
Side rake - 5° to 7°
Front rake - 5°

Cutting speeds The best results are achieved at 20 ft/sec
Good surface finish - Feed rate -.010" rev

MILLING

Speeds and feeds as noted under turning instructions

DRILLING

Speed – 20ft/sec
Feed - .040"/sec

SAWING

Bandsaws – use fine tooth metal cutting blades
Circular/table saws – Wood cutting saws with tungsten carbide tips

SANDING

Accurate thickness of flat sheet and components can be achieved using a wide belt sanding machine.
Rough sanding acceptable finish – 50 grit
Accurate sanding good finish – 80 grit
Final cut on accurate work should be limited to .001"

DUST EXTRACTION

Ultracomp composites are non-toxic but we advise the use of dust extraction when machining. The amount of dust will depend on the type of machining being done. As a rule, it can be compared to the machining of wood in volume of dust particulate.

- Turning/Milling – produces a heavy swarf instead of a dust
- Drilling – as with wood this operation produces large quantity of coarse dust
- Sawing – recommend dust extractor in saw area
- Sanding – produces fine dust which requires extraction. Breathing mask is recommended.

DUST CAN BE CUT DOWN CONSIDERABLY DURING TURNING OR MILLING BY USING A MIST OF WATER FROM A SPRAY BOTTLE.

We're ready to put our engineering expertise to work for you from prototype to production.

Engineering | Custom Fabrication | Manufacturing



CJ Composite

- Self-Lubricating
- Low weight | High Strength
- Chemical Resistance
- Direct replacement for Bronze



Ultracomp®

- Self-Lubricating
- High Load | Low Speed
- 54,400 PSI Compressive Strength
- Exceptional Resistance to Vibration and Impact



TriSteel™

- Self-Lubricating
- High Load | High Speed
- Metal Backed Bearing System
- 100% Lead Free



Rulon®

- Self-Lubricating
- Low weight | High Strength
- Low Coefficient of Friction
- Chemically Resistant



TriStar



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