

## Focus Ester PA 117

### PRODUCT DESCRIPTION

#### Polymerized Saturated Branched-Chain Ester for Group II Oils

**Focus Ester PA 117** is a unique synthetic polymerized ester designed to boost performance and enhance finish in severe metalworking applications. **Focus Ester PA 117** is oil-soluble, but can be used to make high performance soluble oil and semi-synthetic machining coolants as well as drawing and stamping fluids. **Focus Ester PA 117** has a molecular weight that gives it a perfect structure to replace chlorinated paraffins. Hydrophobic moieties have been incorporated into the polymeric ester to improve its solubility properties in higher refined paraffinic oils. **Focus Ester PA 117** is a branched-chain fatty acid, which offers the highest level of thermal and hydrolytic properties. Also, it is expected to be less susceptible to bacterial attack than conventional fatty esters. In addition to replacing chlorine, **Focus Ester PA 117** can be used to replace or reduce treat levels of all boundary and EP additives, like phosphorous, sulfur, lard oil, blown oil and other fatty friction modifiers.

### APPLICATIONS

**Focus Ester PA 117** is formulated into emulsion systems like soluble oils, semi-synthetic, synthetic, drawing and stamping and other water-dilutable fluids that provide exceptional lubricity. Treatment levels of 1% to 15% into the concentrate are suggested. **Focus Ester PA 117** can be used in straight cutting oil and industrial lubricant oil applications in combination with or without low amounts of sulfur and phosphorus, depending upon the severity of the operation. **Focus Ester PA 117** will replace chlorine, inactive sulfur compounds, blow oil, lard oil and other fatty friction modifiers.

### BENEFITS

- Excellent thermal, oxidative and hydrolytic stability
- Ashless: will not cause staining
- Light in color with no odor
- High degree of saturation
- Replaces all fats and fatty compounds, reducing biological attack
- Offers dual purpose capability for cutting and hydraulics

### TYPICAL PROPERTIES

Feature	Unit	Standard Value
Appearance @ 30 °C	-	Clear viscous amber liquid
Specific gravity @ 25 °C	-	1.00
Acid number	mg KOH/g	3
Viscosity @ 40 °C	cSt	4500
Viscosity @ 100 °C	cSt	300
Viscosity Index	-	207

### PACKAGING

Packaging	Description	Net Weight
Drums	55 gallon non-returnable	435 lbs
Totes	275 gallon non-returnable	2,175 lbs

### HANDLING, SAFETY, HEALTH AND ENVIRONMENT

See safety data sheet

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