

**Supplier - SMART OIL**  
**Smart HMPE 9320**  
*High Mwt.Polyester Ester*  
*High Molecular Wt Polymeric Ester*

### Typical Properties

|                                                                           |                                    |
|---------------------------------------------------------------------------|------------------------------------|
| Appearance                                                                | Clear Yellow to Light Amber Liquid |
| Specific Gravity@25°C                                                     | 0.900-1.000                        |
| Viscosity@40°C, cSt                                                       | 215 - 250                          |
| Acid Value, mgKOH/g                                                       | ≤20                                |
| Flash Point C.O.C., °C                                                    | > 245                              |
| Viscosity Index                                                           | > 165                              |
| Mineral Oil Content                                                       | Nil                                |
| 5%ADDITIVE+95%SN150 P <sub>B</sub> /P <sub>D</sub> ,kg+                   | 61 / 160                           |
| 5%ADDITIVE+5%SMART BASE 2517+90%SN150 P <sub>B</sub> /P <sub>D</sub> ,kg+ | 94 / 315                           |

\*4 Ball Wear Test; Server Motor Speeds reach 1500rpm (P<sub>B</sub>) and 1760rpm (P<sub>D</sub>) in 0.03sec.

### Product Description

**SMART HMPE 9320** is a clear yellow high molecular weight polymeric ester that contain no sulfur, chlorine and phosphorous. Due to its unique molecular structure and high affinity characteristics, it can adhere tightly to the metal surface even at elevated temperatures, which performs outstanding anti-frictional and anti-wear properties of lubricants. It can be used in several operations like oil-based formulations, soluble oils and semi-synthetic systems.

**SMART HMPE 9320** has a high degree of satuation that can prevent contamination at contact points of tools and metal surfaces from oxidation.

**SMART HMPE 9320** has high temperature stability and hydrolytic stability, which can extend coolant life even at tough processing.

**SMART HMPE 9320** can replace sulfur, chlorine and phosphorous containing additives with similar performance. Moreover, it can avoid the reduction of product shininess due to the otherwise chemical reaction of the extreme additive with the metals during machining.

**SMART HMPE 9320** possesses high viscosity index and good shear stability; which can maintain the corresponding functions of lubricatiion, anti-wear and extreme pressure at elevated temperatures at contact points during machining.

**SMART HMPE 9320** is an ash-less additive and has no residue during high temperature operations. It exhibits no corrosion to non-ferrous metals and is suitable for cutting, drawing, and stamping operations on aluminum alloys.

### Applications

Threading / Tapping / Cold Head (Cut Side Only)  
 Drawing  
 Automatic Screw Machines / Stamping

### Suggested Treat Rates, %wt

3 - 15  
 5 - 15  
 2 - 5

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