

Supplier - SMART OIL
SmartPhos P7900
Phosphate Ester
Phosphate Containing Additives

Typical Properties

Appearance	Amber Liquid
Specific Gravity@25°C	0.950 - 1.150
Viscosity@40°C, cSt	1500 - 2200
Phosphorus Content, %wt	> 4
Acid Value, mgKOH/g	< 250
Flash Point C.O.C., °C	> 160
P _B /P _D , kg+	135 / 315

*4 Ball Wear Test; 5% additive in SN150, Server Motor Speeds reach 1500rpm (P_B) and 1760rpm (P_D) in 0.03sec.

Product Description

SMARTPHOS P7900 is a light color phosphate ester, suitable for the use in soluble and neat oil formulations.

SMARTPHOS P7900 can attain good synergistic effect when used together with EP additives such as sulfur and chlorine containing compounds; thus it can provide excellent lubricity, anti-wear and EP properties in cutting oils or cooling systems.

SMARTPHOS P7900 has excellent performance in heavy-duty operations especially machining stainless steels such as 316 and 316L, or titanium alloys. In addition, due to its anti-wear property, it can effectively reduce the smoke produced during machining and improve the surface finishing of the workpieces.

Due to its high viscosity, **SMARTPHOS P7900** is specially suitable for stamping, drawing and forming operations. Meanwhile, it will not leave behind residue because it is easy emulsified.

SMARTPHOS P7900 becomes translucent micro-emulsion when diluted with water. It can replace sulfur and chlorine EP additives to provide superior anti-wear and EP properties in water-based formulations, such as soluble oils, rolling oils and semi-synthetic fluids.

SMARTPHOS P7900 is specially effective in protecting the yellow metals from staining, such as aluminum and magnesium.

Applications

Oil-Based Formulations
Water-Based Formulations

Suggested Treat Rates, %wt

2 - 5
1 - 2

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