

## CYLINDER OIL S-220, S-460 & S-680 Steam Cylinder/Gear Oil

### Typical Properties

GRADE	S-220	S-460	S-680
ISO Grade	220	460	680
Viscosity, cSt			
At 40 C	217	429	625
At 100 C	18.6	29.0	37.0
Viscosity Inde	95	95	95
Flash Point, (COC) <sup>o</sup> F( <sup>o</sup> C)	465(241)	500(260)	510(266)
Pour Point, <sup>o</sup> F( <sup>o</sup> C)	5(-15)	10(-12)	15(-9)
Gravity, API @ 60 <sup>o</sup> F	28.5	27.0	22.0

The values shown are typical of current production. Some are controlled in the manufacturing process, while others are not. All of them may vary within tolerable ranges.

Cylinder Oil S-220/S-460/S-680 consists of high viscosity index base oils with foam resistance and rust protection properties. The product possess excellent lubricity and metal wettability characteristics with high film strength. This combination of metal wetting and oil emulsibility results in improved oil lubricity in the presence of wet steam or water. Oil separation from the condensate will occur at moderate levels. This lubricant features properties to meet the heavy load and high operating temperature demands of enclosed worm gears.

### APPLICATIONS

Recommended for severe steam cylinder applications when steam cylinder parts are subjected to saturated steam of 150 pounds pressure and under (higher pressures for dry steam) and where the quality of steam is considered poor and oil separation from the condensate is not an acute consideration. This oil will atomize very readily and adheres to cylinder parts under the most severe steam conditions. Cylinder Oil S is very effective in lubricating the sliding gear surfaces in worm gear applications, couplings, and bearings in the appropriate viscosity grade. Compression systems embodying various gases entrained with moisture can also be adequately lubricated.