## Machine Oil

Sigma Machine Oils contain high quality mineral base oils and anti-rust \& anti-oxidant additives. That possess good natural lubricating properties enhanced by modern refining techniques. It has a very low pour point and high viscosity index.
Sigma Machine Oils are formulated to meet the demands of circulating systems in industrial equipment. These systems expose the lubricant to a broad range of operating temperatures.

## APPLICATION

Sigma Machine Oil is a versatile range of oils that can be used wherever a straight mineral oil with modest additive treatment has been specified. Particularly recommended for industrial use in enclosed and circulating systems, Central lubricating systems, oil baths, automatic lubricators gear boxes, including wet-end systems, Chain drive belts, Rollers, dryer bearings and all oill-lubricated bearings, machine tool headstocks, enclosed gearboxes and vacuum pumps as well as general lubrication during equipment installation.

## BENEFITS

- Long lubricant life
- Excellent wear \& rust protection
- Lubricates efficiently over a wide temperature range
- Creates an effective water repellent film
- Extends machine \& equipment life

TYPICAL CHARACTERISTICS

| TEST DESCRIPTION | METHOD | TYPICAL RESULTS |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ISO VISCOSITY GRADE | - | $\mathbf{3 2}$ | $\mathbf{6 8}$ | $\mathbf{1 0 0}$ | $\mathbf{1 5 0}$ | $\mathbf{2 2 0}$ | $\mathbf{3 2 0}$ |
| Appearance | Visual | B \& C | B \& C | B \& C | B \& C | B \& C | B \& C |
| Color | ASTM D 1500 | L 0.5 | L 0.5 | L 0.5 | L 1.5 | L 2.5 | L 2.5 |
| Density at $15^{\circ} \mathrm{C}$ | ASTM D 4052 | 0.8585 | 0.8649 | 0.8750 | 0.8787 | 0.8871 | 0.8946 |
| Density at $29.5^{\circ} \mathrm{C}$ | ASTM D 4052 | 0.8494 | 0.8557 | 0.8614 | 0.8696 | 0.8780 | 0.8855 |
| Kinematic Viscosity at $40^{\circ} \mathrm{C}$ | ASTM D 7042 | 33.33 | 69.21 | 100.87 | 159.26 | 220.43 | 326.69 |
| Kinematic Viscosity at $100^{\circ} \mathrm{C}$ | ASTM D 7042 | 5.67 | 9.28 | 11.19 | 16.25 | 18.29 | 25.08 |
| Viscosity Index | ASTM D 2270 | 111 | 109 | 107 | 107 | 105 | 99 |
| Pour Point | ASTM D 97 | -27 | -21 | -18 | -18 | -15 | -15 |
| Flash Point | ASTM D 93 | 215 | 218 | 240 | 244 | 250 | 260 |
| Total Acid number (TAN) | ASTM D 664 | 0.345 | 0.345 | 0.345 | 0.345 | 0.350 | 0.350 |



