



Product Information:  
**ALTO ISO VG 22 – 1000**  
**Industrial Machine Oils**

**Description:**

The Alto range of machine oils contain anti-rust and antioxidant additives (R&O) that are blended into high quality mineral oils that possess good natural lubricating properties enhanced by modern refining techniques. They have good viscosity indices and separate from water cleanly and quickly.

**Applications:**

Alto Machine Oils are 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, oil baths, automatic lubricators, wick oilers, spray, splash and mist lubricators and all oil-lubricated bearings, machine tool headstocks, enclosed gearboxes and vacuum pumps. These oils are also suitable for all general lubrication uses and oilcan applications.

Alto 460, 680 and 1000 can also be used as steam cylinder oils when condensate recovery is required.

**Physical Characteristics:**

ISO VG Grade	22	32	46	68	100
Part Number	ALT	ATH	AFS	ALS	AMO
Density @ 15°C	0.865	0.871	0.878	0.880	0.886
Viscosity @ 40°C (cSt)	20.9	33.8	47.4	67.7	94.8
Viscosity @ 100°C (cSt)	4.19	5.62	6.91	9.05	10.8
Viscosity Index	102	100	100	100	98
Closed Flash Point (°C)	200	210	218	210	230
Pour Point (°C)	-30	-24	-18	-18	-18

ISO VG Grade	150	220	320	460	680	1000
Part Number	ALM	ALA	AMA	ALF	ASM	ALO
Density @ 15°C	0.890	0.895	0.900	0.905	0.915	0.925
Viscosity @ 40°C (cSt)	147.0	225.6	345.1	457.4	684.3	974.9
Viscosity @ 100°C (cSt)	14.5	19.4	25.5	30.4	36.8	43.9
Viscosity Index	96	96	96	94	90	84
Closed Flash Point (°C)	236	238	240	245	250	260
Pour Point (°C)	-18	-18	-10	-10	-7	-6

Figures based on average production values

**Please note:** Recommended shelf life for these products, kept in sealed containers, in a dry environment with minimal temperature fluctuations, is 3 years. Beyond this, re-testing is recommended.

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