

## Industrial Gear Oil K21M 460

**Bardahl Special Blend K21M** is a specially developed industrial oil with specific properties and an extra high viscosity. This oil contains Bardahl's 'polar attraction', the formula that ensures that the oil can handle very high pressures and therefore ensures less friction and wear of the lubricated parts. Special additives also ensure that the oil does not foam at high speeds and rising temperatures.

### The problem

Friction between machine parts takes more energy, ensures high temperatures and causes extra friction and wear. Heavy loads such as continuous use, high speeds and unfavorable environmental conditions increase this effect and ensure higher maintenance costs and longer downtime of machine or vehicle.

Industrial machines are often heavily loaded at high speeds, which causes the increasingly warmer oil to form foam. This heat and foam reduce the lubricating capacity of the oil. This reduction in the lubricating capacity automatically leads to increased friction and therefore wear. A special anti-foam addition prevents foaming and ensures that the oil lubricates well even at high speeds. Bardahl's polar attraction formula ensures that old precipitations are removed and forms a lubricating film, which can tolerate pressures and temperatures, many times higher than those of ordinary oils.

**Bardahl Special Blend K21M** also contains multiple corrosion retardant components, which function as a barrier against corrosion and oxidation.

### Specifications

AGMA - 9005-E02 | AISE - 224 | DAVID BROWN - S1.53.101E | DIN - 51517 CLP | ISO - 460

### Analysis data

Test			Results
Category	Method	Unit	460
Density at 15°C	D 4052	kg / m <sup>3</sup>	910
Viscosity at 40°C	D 445	Cst	456
Viscosity at 100 °C	D 445	Cst	30,0
Viscosity index	D 2270		98
pourpoint	D 97	°C	-18
Flashpoint COC	D 92	°C	260
ASF A/16,6/140	DIN 51354	Level	12

### Analytical data viscosities 32 to 150

Test			Result				
Category	Method	Unit	32	46	68	100	150
Density at 15°C	D 4052	kg / m <sup>3</sup>	885	880	885	890	892
Viscosity at 40°C	D 445	Cst	34	44	65	98	147
Viscosity at 100 °C	D 445	Cst	6.1	6,6	8,5	11,1	14,6
Viscosity index	D 2270		100	100	100	96	95
pourpoint	D 97	°C	-27	-27	-24	-24	-24
Flashpoint COC	D 92	°C	225	224	225	235	240
ASF A/16,6/140	DIN 51354	Level	12	12	12	12	12

**Analytical data viscosities 220 to 1000**

Test			Result				
Category	Method	Unit	220	320	460	680	1000
Density at 15°C	D 4052	kg / m <sup>3</sup>	900	905	910	925	
Viscosity at 40°C	D 445	Cst	222	319	456	650	978
Viscosity at 100 °C	D 445	Cst	18,8	23,6	30,0	36	51.2
Viscosity index	D 2270		98	98	98	88	98
pourpoint	D 97	°C	-21	-21	-18	-9	-2
Flashpoint COC	D 92	°C	245	255	260	262	265
ASF A/16,6/140	DIN 51354	Level	12	12	12	12	12
4 Ball EP Test ; LWI*/kg Weld Point,kg:	astmd2783		53.7 250				
4 Ball Wear Test ;20 kg/1800 rpm/75°C for 1 hr,mean wear scar diameter,mm:	ASTM D2266		0.29				
Timken OK Load .lb:	ASTM D2782		70				
FZG 4 Square Gear Test,load stage : 12 pass Total weight loss,mg:	DIN 51534		16.7				

\*LWI-load wear index

All viscosities described above available on request.

**Industrial Gear Oil K21M 460**

**Article number** 75155-460

**Contents** 5 liter

**Article number** 75182-460

**Contents** 25 litres

**Article number** 75186-460

**Contents** 60 litres

**Article number** 75192-460

**Contents** 210 litres