

# ML 615-622-632-646-668 SYNTHETIC GEAR OILS

# PRODUCT INFORMATION

High performance gear oils made from synthetic base fluids with high viscosity index and carefully selected additives.

They provide effective friction reduction and extreme pressure protection under severe conditions including high and low operating temperatures.

## Beneficial Qualities

- Contains a "tacky" additive that enables the oil to cling to and climb the gears at start-up, thereby providing excellent gear protection and wear reduction
- · Less friction, heat and wear. Longer gear life
- Excellent oxidation and thermal stability.
  Longer oil life
- · High protection against corrosion and rust
- Rapid water separation. Will not emulsify.
  Drain off water with ease
- High oil film strength, providing extreme pressure protection
- Very good performance at low temperatures, protecting gears during cold startup
- Energy savings up to 3.6%, due to high viscosity index and low coefficient of friction
- Non-foaming. Lower oil temperature.
  Less noise



## Typical Applications

 Long life lubrication of all types of heavily loaded industrial gearboxes requiring an Extreme Pressure (E.P.) high performance gear oil.



### **Technical Details**

	ASTM Test	Unit	Results				
PRODUCT:			ML615	ML622	ML632	ML646	ML668
ISO Grade			150	220	320	460	680
AGMA Grade			4 EP	5 EP	6 EP	7 EP	8 EP
Density @ 15 °C	D-1298	kg/L	0,868	0,873	0,877	0,880	0,885
Viscosity @ 100 °C	D-445	cSt	18,6	24,7	32,5	42,3	56,3
Viscosity @ 40 °C	D-445	cSt	150	220	320	460	680
Viscosity Index	D-2270		140	141	142	143	145
Flash Point	D-92	°C	190	200	210	220	224
Pour Point	D-97	°C	-33	-30	-27	-24	-18
Foam Test	D-892		0/0;0/0;0/0	0/0;0/0;0/0	0/0;0/0;0/0	0/0;0/0;0/0	0/0;0/0;0/0
Rust Test	D-665A		Pass	Pass	Pass	Pass	Pass
Copper Corrosion	D-130		1b	1b	1b	1b	1b
Timken OK Load	D-2782	lbs	70	70	70	70	70
Test Four-Ball E.P., Weld Point	D-2783	kgf	315	400	400	400	400
Test Four-Ball Wear (75°C, 1200 rpm, 40 kgf, 1 h)	D-4172	mm	0,40	0,38	0,37	0,36	0,36
Colour			Purple	Purple	Purple	Purple	Purple

## **Performance Requirements** Met:

API GL-5

AGMA 9005 E02

DIN 51517-3 CLP

ISO 12925-1 CKB

ISO 12925-1 CKD

FLENDER T 7300

US STEEL 224

#### **Product Manufactured in Argentina under** an ISO 9001 and ISO 14001 Certified Quality & Environmental Management System

#### DISCLAIMER NOTICE:

MAK LUBES International Ltd does not guarantee that the information about the product is complete or accurate in all respects.

MAK LUBES International Ltd does not warrant that the product is suitable for your specific use of the product.

MAK LUBES International Ltd shall not be liable for any consequential loss, incidental loss, damages resulting from misuse or sale of the product.



+44 (0) 7464 325 169



sales@mak-global.org



mak-lubes.org