



**YOU GET OUT
WHAT YOU
PUT IN.** 

4T Mineral MA

Kendall® 4T Mineral MA is a high-quality, mineral-based engine oil designed primarily for use in 4-stroke cycle motorcycles, scooters, and all-terrain vehicles (ATVs). It also may be used as transmission oil in motorcycles and ATVs where the manufacturer specifies the use of motor oil in the transmission.

4T Mineral MA is formulated to provide excellent wear protection, to minimize the formation of sludge and varnish, and to resist viscosity and thermal breakdown at high temperatures. It also protects against rust and bearing corrosion and is resistant to excessive foam buildup and air entrainment.

4T Mineral MA meets the performance requirements of major motorcycle manufacturers and API Service SL. It meets JASO MA friction test requirements for use in motorcycle engines with integrated clutch and transmission.

Applications

- 4-stroke cycle motorcycles, scooters, and ATVs
- 4-stroke cycle gasoline engines in other mobile or stationary equipment where an API Service SL quality oil is specified

4T Mineral MA meets the requirements of and is approved for:

- JASO T 903:2011 Performance Classification MA

Features/Benefits

- Resists viscosity and thermal breakdown at high temperatures
- Protects against sludge and varnish formation
- Protects against scuffing and wear
- High shear stability
- Protects against rust and bearing corrosion
- Good resistance to foaming and air entrainment
- Proper frictional properties to avoid clutch slippage

**Conventional
Engine Oil for
4-Stroke Cycle
Motorcycles,
Scooters & ATVs**



4T Mineral MA

Typical Properties			
SAE Grade	10W-30	20W-50	25W-50
Specific Gravity @ 60°F	0.871	0.879	0.883
Density, lbs/gal @ 60°F	7.25	7.32	7.35
Color, ASTM D1500	2.5	2.5	2.5
Flash Point (COC), °C (°F)	226 (439)	255 (491)	245 (473)
Pour Point, °C (°F)	-43 (-46)	-39 (-38)	-36 (-33)
Viscosity, Kinematic			
cSt @ 40°C	76.5	176	196
cSt @ 100°C	11.4	19.1	19.8
Viscosity Index	141	123	116
Cold Cranking Viscosity, cP	5,900	8,550	6,004
@ (°C)	(-25)	(-15)	(-10)
High Temp/High Shear Viscosity, cP @ 150°C	3.2	4.8	5.2
Sulfated Ash, ASTM D874, wt %	0.95	0.95	1.09
Total Base Number (TBN), ASTM D2896	7.6	7.6	7.6
Phosphorus, wt %	0.100	0.100	0.114
Zinc, wt %	0.110	0.110	0.125

Health & Safety Information

For recommendations on safe handling and use of this product, please refer to the Safety Data Sheet via <http://www.phillips66.com/SDS>

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Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

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