

# PennGrade 1<sup>®</sup> V2 4-Stroke Motorcycle Oil SAE 10W-40



## Product Description

Blended with premium base oils, select synthetic components and superior additive chemistry, **PennGrade 1<sup>®</sup> V2 4-Stroke Motorcycle Oil SAE 10W-40** is specifically formulated to offer the ultimate in quality, performance and protection for motorcycles. Unlike most other multi-viscosity motorcycle oils, the very unique viscosity modifier used in our PennGrade 1<sup>®</sup> oil is not based upon conventional polymers which can shear significantly with use and cause loss of oil viscosity. This viscosity modifier imparts exceptional High Temperature High Shear viscosity protection to our **PennGrade 1<sup>®</sup> V2 4-Stroke Motorcycle Oil SAE 10W-40** that is so critical for protection of high speed, high revving motorcycle engines. Further, in applications where the same oil is used for lubrication of both the engine and transmission, the excellent shear stability of this motorcycle oil offers a distinctive operational advantage over other less shear-stable oils. Increased levels of 'zinc' (zinc dialkyldithiophosphate) in **PennGrade 1<sup>®</sup> V2 4-Stroke Motorcycle Oil SAE 10W-40** provide exceptional anti-wear/anti-scuffing protection. Detergents, dispersants and anti-oxidants offer protection from thermal and/or oxidative oil breakdown that can lead to varnish and deposit formation. Anti-foam agents reduce oil foaming and air entrainment under high-speed and/or high-RPM operation.

## Performance Advantages

The **PennGrade 1<sup>®</sup> V2 4-Stroke Motorcycle Oil SAE 10W-40** affords excellent High Temperature protection for air and water cooled 4-cycle engines and resists thermal and/or oxidative breakdown. It also offers superior high temperature/high shear viscosity. It meets JASO MA-2 performance requirements for use in wet clutches. JASO MA-2 offers improved frictional characteristics exceeding those of JASO M. Oils meeting JASO MA-2 are suitable for use in JASO MA applications.

## Typical Applications

Suitable for use in Honda<sup>®</sup>, Kawasaki<sup>®</sup>, Suzuki<sup>®</sup>, Yamaha<sup>®</sup> and other 4-stroke motorcycles where an API SJ, SH or SG quality oil is specified. Consult your owner's manual for proper oil viscosity and quality selection. May also be used in ATV's, golf carts, 4-wheelers and other 4-stroke engine applications.



## Typical Properties

SAE Viscosity Grade	Test Method	10W-40
API Service	SAE J183	SJ, SH, SG
Viscosity @ 100°C, cSt	ASTM D445	13.5
@ 40°C, cSt	ASTM D445	85.5
Viscosity Index	ASTM D2270	162
Pour Point, °F (°C)	ASTM D5949	-35 (-39)
Flash Point, °F (°C)	ASTM D92	425 (218)
Sulfated Ash, Weight %	ASTM D874	0.88
API Gravity	ASTM D4052	32.1
Density, lbs/gal (g/L)	Calculated	7.202 (863)
CCS, cP	ASTM D5293	6,600 @ (-25°C)
MRV, cP	ASTM D4684	28,000 @ (-30°C)
HTHS Viscosity, cP @ 150°C	ASTM D4683	4.39
Zinc, Mass %	ASTM D6481	N/A
Phosphorous, Mass %	ASTM D6481	N/A
Color	ASTM D1500	Green
TBN	ASTM D2896	7.5

### D-A Part Number:

Case – 12/1 Qt

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