



PRODUCT DATA SHEET

MOTORCYCLE ENGINE OIL

SAE 10W-50 Fully Synthetic

API SN | JASO MA2

M10W50F

Rev 1
21 June 2026

More viscosity, more film. Built for bikes that work harder.

WHAT IT IS

TWIIN 4T SAE 10W-50 is a fully synthetic motorcycle engine oil built on an MPAO and ester base stock blend. The 10W-50 grade delivers meaningfully thicker oil film at operating temperature than a 10W-40 — 18.6 cSt versus 14.3 cSt at 100°C — making it the right choice for higher-displacement engines, bikes that run hotter, or riders who cover longer distances. JASO MA2 rated. No friction modifiers. No compromise on clutch performance.

APPLICATION GUIDE

Which bikes	4-stroke motorcycles with wet-clutch gearboxes. Suited to larger-displacement engines (typically 400cc and above), heavily loaded or high-revving engines, and any motorcycle whose manufacturer specifies a 10W-50 grade.
Why 10W-50 over 10W-40	At 100°C operating temperature, 10W-50 delivers a 30% thicker oil film than 10W-40 (18.6 vs 14.3 cSt). This translates to better bearing and valve-train protection under sustained high load — touring, highway riding, and high-ambient-temperature conditions.
Drain interval	Follow your manufacturer's recommendation. Fully synthetic formulations are capable of extended drain intervals — consult your owner's manual.

FEATURES AND BENEFITS

Enhanced film thickness	Higher "50" grade means more oil between moving parts at temperature — critical protection for larger, harder-working engines.
Wet-clutch compatibility	JASO MA2 certification ensures no clutch slip under hard acceleration. The viscosity index of 165 means film stability is maintained across a wide temperature range.
Thermal stability	MPAO and ester base stocks resist viscosity breakdown at sustained high temperatures — stable performance lap after lap or kilometre after kilometre.
Shear resistance	Ester base oil maintains viscosity grade under the mechanical shear stress of high-performance gearboxes between drain intervals.
Cold-start protection	Despite the thicker "50" high-temperature grade, the "10W" cold rating ensures fast oil flow at startup — no compromise on cold-start protection.

SPECIFICATIONS

TWIIN recommends this product where the following OEM specifications apply:

API Service Category	API SN
JASO Standard	JASO MA2
SAE Viscosity Grade	10W-50
Packaging	1 litre flexible pouch — 80–90% less plastic than a traditional rigid bottle

TYPICAL PHYSICAL CHARACTERISTICS

Typical values based on manufacturer test data. Not a product specification. Batch values may vary within grade limits.

Property	Test Method	Typical Value
Specific Gravity (60/60°F, g/mL)	ASTM D1298	0.84
Flash Point, COC (°C)	ASTM D92	>248°C (COC, ASTM D92)
Kinematic Viscosity @ 40°C (cSt)	ASTM D445	127
Kinematic Viscosity @ 100°C (cSt)	ASTM D445	18.6
Viscosity Index	ASTM D2270	165
Pour Point (°C)	ASTM D97	-33

Safety Data Sheet: SDS No. M10W50F is available at twiin-oil.com. Always read the SDS before handling this product.

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