

Racing Only Motor Oil

BRIGGS & STRATTON SYNTHETIC 4T RACING OIL

Product Code: GBS2960-EA



Product Description

AMSOIL Briggs & Stratton Synthetic 4T Racing Oil delivers maximum horsepower and durable wear protection in a single formulation, purpose-built for the unique demands of small-displacement, air-cooled four-stroke racing engines used in kart, junior drag, and quarter midget competition.

Air-cooled racing engines operate in a brutal environment. They spin at sustained high RPMs, rely on splash lubrication in many configurations, and generate extreme heat with limited cooling capacity. Automotive oils aren't designed for this. PAG-based and conventional mineral karting oils fall short too, either sacrificing protection for power or leaving horsepower on the table with excessive viscosity drag. The oil in these engines has to do more with less, and it has to do it consistently from green flag to checkered flag.

MAXIMIZES HORSEPOWER WITHOUT SACRIFICING WEAR PROTECTION

Most racers face a tradeoff: run a lighter oil to free up power, or run a heavier oil to keep the engine alive. Synthetic 4T Racing Oil eliminates that compromise. Specialized friction modifiers and advanced additives reduce energy loss due to internal friction, giving racers the horsepower characteristics of a lite oil combined with the film strength and wear resistance of a heavier one. In ASTM D4172 Four-Ball Wear testing at 40 kg load, 75 degC, and 1200 rpm for one hour, Synthetic 4T Racing Oil produced a wear scar of just 0.36 mm, confirming strong anti-wear performance under load. More power to the ground, less wear on the engine.

HANDLES THE EXTREME HEAT OF AIR-COOLED RACING ENGINES

Air-cooled Briggs & Stratton racing engines can push oil temperatures well beyond what a typical automotive oil is formulated to handle. Synthetic 4T Racing Oil is built on pure synthetic base oils that resist thermal breakdown far better than conventional alternatives. It posts a NOACK Volatility result of just 9.7% weight loss (ASTM D5800), meaning it resists evaporative burn-off and maintains its protective qualities at elevated temperatures. The flash point of 226 degC (439 degF) and fire point of 244 degC (471 degF) further underscore its thermal stability. Reduced thermal breakdown means fewer sludge and deposit problems, which translates directly to sustained compression and consistent power output over the life of the engine.

RESISTS FOAM AT HIGH RPM

Splash-lubricated engines are particularly prone to oil foaming, especially at the elevated RPMs common in kart racing and other small-engine competition. Foam introduces air into the oil film, reducing its ability to protect moving parts and carry heat away from critical surfaces. Synthetic 4T Racing Oil is engineered with powerful anti-foam agents that maintain a durable, consistent lubricating film even under the most aggressive operating conditions.

PROTECTS AGAINST CORROSION BETWEEN RACES

Racing engines often sit idle between events, sometimes for weeks. Moisture accumulation during storage can lead to corrosion on internal engine surfaces. Synthetic 4T Racing Oil contains dedicated corrosion inhibitors that guard against rust formation during

downtime, so the engine is ready to perform when it hits the track again.

STRONG VISCOMETRIC PROPERTIES ACROSS A WIDE TEMPERATURE RANGE

With a viscosity index of 156, Synthetic 4T Racing Oil maintains stable viscosity across a broad operating temperature range. Its high-temperature/high-shear viscosity of 4.2 cP at 150 degC (ASTM D5481) confirms that it holds its protective film under the most demanding thermal and mechanical stress. A pour point of -46 degC (-51 degF) means it flows freely in cold conditions, though most racers will care more about what happens at the top of the temperature range.

APPLICATIONS AND COMPATIBILITY

Synthetic 4T Racing Oil is recommended for stock and modified small-displacement air-cooled racing engines, including Briggs & Stratton single-cylinder and V-Twin competition engines. It works in both splash-lubricated and pressure-lubricated configurations and is compatible with gasoline and alcohol fuels. When converting from another oil, do not mix. Drain the existing oil completely, refill with Synthetic 4T Racing Oil, run the engine at idle to low speed for 2-3 minutes, then drain and refill again. Compatible with mineral oils.

SERVICE LIFE

Follow the original equipment manufacturer or engine builder recommendations for oil change intervals.

Technical Specifications

Property	Value	Test Method
Kinematic Viscosity @ 100 degC, cSt	11.6	ASTM D445
Kinematic Viscosity @ 40 degC, cSt	72.2	ASTM D445
Viscosity Index	156	ASTM D2270
Pour Point, degC (degF)	-46 (-51)	ASTM D97
Flash Point, degC (degF)	226 (439)	ASTM D92
Fire Point, degC (degF)	244 (471)	ASTM D92
Four-Ball Wear Test (40 kg, 75 degC, 1200 rpm, 1 hr), scar, mm	0.36	ASTM D4172
NOACK Volatility, % weight loss (g/100g)	9.7	ASTM D5800
High-Temperature/High-Shear Viscosity @ 150 degC, 1.0 x 10 ⁶ s ⁻¹ , cP	4.2	ASTM D5481

Frequently Asked Questions

Q1: What engines is Briggs & Stratton Synthetic 4T Racing Oil designed for?

Briggs & Stratton Synthetic 4T Racing Oil (GBS2960) is specially engineered for high-revving, air-cooled, splash-lubed racing engines commonly found in kart racing applications. It is tested and validated by both Briggs & Stratton and AMSOIL, and is safe for use in both gasoline and alcohol-burning stock or modified engines. It is purpose-built to avoid the shortcomings of using automotive, PAG, or mineral-based karting oils in these demanding racing environments.

Q2: How does Briggs & Stratton Synthetic 4T Racing Oil maximize horsepower in kart racing engines?

Briggs & Stratton Synthetic 4T Racing Oil is engineered with specialized friction modifiers and advanced additives that reduce energy loss due to friction, helping racers put more power to the ground. It combines the horsepower benefits of a lite oil with the wear protection of a heavier oil, so racers don't have to sacrifice protection for performance. This unique balance helps maximize engine output in competitive racing conditions.

Q3: What technical specifications and testing back up Briggs & Stratton Synthetic 4T Racing Oil?

Briggs & Stratton Synthetic 4T Racing Oil has been tested and validated by both Briggs & Stratton and AMSOIL for use in high-revving, air-cooled, splash-lubed racing engines. It is formulated with pure synthetic base oils for increased thermal stability and includes powerful anti-foam agents, specialized friction modifiers, and corrosion inhibitors. Full technical specifications are available in the product's data bulletin.

Q4: How does Briggs & Stratton Synthetic 4T Racing Oil compare to automotive or mineral-based karting oils?

Unlike automotive, PAG, or mineral-based karting oils, Briggs & Stratton Synthetic 4T Racing Oil is specifically formulated for the unique demands of air-cooled, splash-lubed racing engines. Its pure synthetic base oils resist extreme heat better than conventional oils, while its advanced anti-foam agents combat the foaming common to high-rpm operation. This purpose-built formulation helps reduce operating temperatures, guard against sludge and deposits, and deliver both the horsepower of a lite oil and the wear protection of a heavier oil -- advantages generic automotive or mineral oils cannot match in a racing environment.

Q5: How does Briggs & Stratton Synthetic 4T Racing Oil help reduce heat and extend engine life in air-cooled racing engines?

Briggs & Stratton Synthetic 4T Racing Oil is formulated with pure synthetic base oils that resist extreme heat common to air-cooled racing engines better than conventional oils. Its increased thermal stability helps reduce operating temperatures and guards against sludge and deposits that rob engines of power. This promotes optimum engine performance and life, helping racers get more out of their engines over time.

Q6: Is Briggs & Stratton Synthetic 4T Racing Oil safe for use in alcohol-burning and modified racing engines?

Yes, Briggs & Stratton Synthetic 4T Racing Oil is safe for use in both gasoline and alcohol-burning engines, whether stock or modified. It resists rust, corrosion, and foaming, and forms a durable lubricating film between engine parts to protect in the most extreme racing conditions. It also helps reduce piston-ring, cylinder, and valve wear for maximum engine compression and power.

Available Product Codes

Product Code	Package Size	Unit of Measure
GBS2960-EA	Quart Bottle	Each
GBS2960-CA	Quart Bottle	Case of 12

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