

RACING FORK OIL 4W

High-end fork oil with 3D Response Technology

Description

A suspension fork must meet a wide range of demands simultaneously. It needs to respond sensitively, maintain consistent ground contact pressure, and provide both comfort and reliable damping performance under all load conditions—over long periods of use. For precise, responsive performance, an extremely low breakaway torque is essential. At the same time, oil viscosity must remain stable even at high temperatures to ensure consistent, high-level performance during long and demanding segments. Optimal damping and lubrication are only achieved over time if the oil prevents foam formation and cavitation effects while providing long service life through high shear stability. In close collaboration with suspension specialists, renowned racing teams, and professional athletes, the MOTOREX Racing Lab developed and tested RACING FORK OIL. Through countless optimization steps, all properties were fine-tuned to perfection—but it is the “3D RESPONSE TECHNOLOGY” that elevates RACING FORK OIL to true cutting-edge performance in liquid form. The three-dimensional molecular structure delivers outstanding damping by absorbing compression and rebound forces across a grid-like network on multiple levels. This 3D architecture minimizes the dreaded stick-slip effect—the sudden transition from static to dynamic friction—resulting in smoother, more consistent fork movement. The result is tangible: extremely sensitive fork response and the confidence that it still works as reliably at the end of a long, demanding race as shortly after the starting line. It’s no coincidence that MOTOREX is proud to be the preferred choice of leading OEMs and racing teams in both the bicycle and motorcycle industries.

Product attributes

- Maximum reduction of friction values
- Minimized breakaway torque (stick-slip)
- Wide temperature stability due to high viscosity index
- Long service life with optimized shear stability
- Very low foaming tendency
- Excellent, fast air-release behavior

Field of application

MOTOREX RACING FORK OIL is an ideal lubrication and damping medium for advanced fork systems with the highest performance requirements. It enables bike and motorcycle suspension systems—both on- and off-road—to reach their full potential.

Application

IMPORTANT: Always follow manufacturer specifications regarding maintenance intervals, viscosity, and fill levels. We strongly recommend against performing suspension maintenance without appropriate technical expertise. Contact the manufacturer, an authorized service center, or a qualified suspension specialist.

Note

Good to know: MOTOREX SUSPENSION GREASE perfectly complements MOTOREX RACING FORK OIL. Both products are precisely matched in their lubricating properties, ensuring long-lasting functionality without mixing or washing each other out.

The above information corresponds to the current state of our knowledge. We reserve the right to make changes. The performance characteristics indicated are based on testing and production tolerances standard in this industry. A safety data sheet is available.

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Technical Data

Properties	Test according to	Unit	Values
Colour			red
Viscosity			4W
Density at 20 °C		g/cm ³	0.881
Viscosity at 40°C	DIN 51562-1	mm ² /s	16.0
Viscosity at 100°C	DIN 51562-1	mm ² /s	5.0
Viscosity index	DIN ISO 2909		> 250.0
Flash point	DIN EN ISO 2592	°C	>= 130
Pourpoint	ASTM D5950	°C	< -40

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