

Brake Fluid

Brake fluid is a hydraulic liquid responsible for power transmission in the brake system. It generally does not consist of mineral oil, but rather of polyglycol. In addition to power transmission, the brake fluid must also perform other tasks. It must protect the brake system against corrosion, lubricate it and in the process be formulated in such a way that seals and other materials are not attacked.



Also important is a higher boiling point. The brake fluid heats when the brakes are used. If it exceeds its boiling point in the process, vapor is formed, which can then result in the complete failure of the brake system. This is one of the reasons why, for example, water is not suitable as a brake fluid.

However, brake fluid has the disadvantage that it attracts water. Over time more and more water collects in it. This water is problematic: on the one hand because it causes corrosion, and on the other hand because it forms vapor and thus lowers the boiling point. The more water found in the brake fluid, the lower the boiling point and the greater the risk of a complete failure of the brake system. This is why in the case of brake fluid not only the boiling point of the pure brake fluid is of importance, but rather also the wet boiling point. That is the boiling temperature when the brake fluid contains 3.5 percent water.

Brake fluid is classified according to the DOT standard.

	DOT 3	DOT 4	DOT 5	DOT 5.1
Basis	Polyglycol	Polyglycol	Silicone	Polyglycol
Boiling temperature °C	≥ 205	≥ 230	≥ 260	≥ 260
Wet boiling point °C	≥ 140	≥ 155	≥ 180	≥ 180

The DOT standard to be fulfilled is indicated by the operating manual and the labeling of the brake fluid container. Brake fluid of another standard can be problematic: In the case of a too low standard, the boiling point may be too low and cause problems. In the event of a too high standard, it can happen that seals and other materials are attacked by the additives.

Due to its water-attracting properties, the brake fluid is regularly changed (usually every two years in accordance with manufacturer instructions), even when the vehicle is not often driven.

LIQUI MOLY has DOT 3, DOT 4 and DOT 5.1 in its program. These products all surpass the respective standards.

DOT 5 is a kind of outsider that is not based on polyglycol, but rather on silicone. This makes the brake fluid water-repellent instead of attracting and is also less aggressive to the materials. It is primarily used with vintage cars. It is not suitable for ABS brakes and may not be mixed with other brake fluids.