

## Genuine BMW Air Filters

- **Specifically matched to every BMW engine variant**
- **Optimal dust absorption through embossed lugs in the filter paper**
- **Features special resin-impregnated filter paper**
- **Optimal dust deposit degree up to 99%**
- **60,000 or 100,000 km optimal filter performance**
- **Temperature-resistant filter housing from fibreglass-reinforced plastic**

### Function in detail

Air filters ensure that the dust and dirt contained in the intake air are prevented from entering the engine and that the engine is always supplied with clean sufficient quantities of air.

- The filter has to be matched exactly to the engine since the airflow volume, rate of flow, and the filter's capability for trapping dirt particles influence the engine performance as well as affecting cylinder and piston wear.
  - Poor or dirty air leads to extensive engine damage. Dirt particles act like sandpaper on pistons, cylinders and bearings. In extreme cases, this can lead to engine failure.
  - Besides filtering the intake air, the filter also has other important functions:
    - Regulating intake air temperature and crankcase exhaust.
    - Reducing engine noise and affecting both the combustion process in the engine and the composition of the exhaust gases.
- A correctly-designed air filter also ensures good fuel economy and less environmental impact.

### Benefits

#### Specifically matched to every engine variant

Genuine BMW Air Filters are matched to every individual BMW engine. Filter capacity, air volume, air temperature and air flow are exactly aligned to every engine variant. They play an important role in reducing intake noise and maintaining engine performance. By allowing the correct air flow rate a Genuine BMW Air Filter will help create the optimal combustion conditions for good fuel economy, performance and lower emissions.

#### Optimal dust absorption capacity through embossed lugs in the filter paper

The longer an air filter can filter dust particles out of the air, the longer it can operate before replacement. With Genuine BMW Air Filters, embossed lugs maintain a gap in the paper folds (filter ash formation) and thus ensure optimal filter dust absorption.

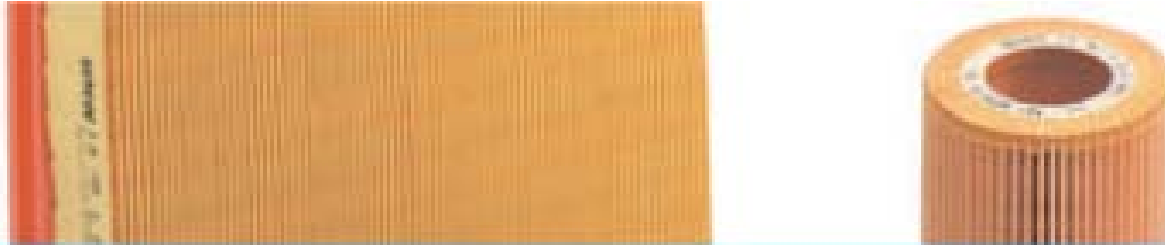
#### With special resin-impregnated filter paper

With Genuine BMW Air Filters, the filter paper is impregnated with a special high-grade resin so that the filter structure stays unaffected by temperature and moisture. Moisture absorption is reduced and thus full performance is achieved throughout its service life.

#### Optimal dust deposit degree up to 99%

The deposit degree defines the filter's ability to retain particles. The higher the deposit degree, the better-protected the engine is against wear. Through intelligent filter construction with their performance data exactly matched to the respective engine type, Genuine BMW Air Filters achieve a dust separation efficiency of up to 99%.





### **60,000 or 100,000 km optimal filter performance**

How long an air filter can be used is calculated by the capacity determined at the test rig and the dust concentration under "normal" driving. The dust concentration for a convoy on dirt roads amounts up to 0.2 g dust per m<sup>3</sup>, on normal roads this figure is approx. 0.003 g/m<sup>3</sup> and on motorways or high-quality roads it drops to just 0.001 g/m<sup>3</sup>. Due to their high capacity, Genuine BMW filters can last under normal driving from 60,000 to 100,000 kilometres!

### **Temperature-resistant filter housing from fibreglass-reinforced plastic**

Genuine BMW Air Filters have a very stable and light air filter housing made from fibreglass-reinforced plastic. This material is suitable for a temperature range from -40 °C to +80 °C (for short times even up to +100 °C) in line with BMW specifications.

### **Quality assurance**

**Genuine BMW Air Filters make a major contribution to preserving the full performance and life of the engine. High-grade materials and processing techniques guarantee the quality requirements that every Genuine BMW Air Filter has to meet. These are continually monitored and optimised in comprehensive series tests and strict checks.**

### **Tested air flow rate**

One of the many tests which Genuine BMW Air Filters undergo is the pressure loss measurement test. The air flows through the filter with a precisely defined amount of pressure. The measurement of the air pressure at the end of the filter tests the pressure loss in the filter: the smaller the pressure loss for the air flow through the filter, the better the engine will perform under a variety of conditions.

### **Measuring filter performance**

A defined amount of contamination of the specified test dust is continuously mixed with the air drawn in on the test rig. The pressure differential is evaluated according to the amount of dust sucked in by the filter. The so-called fraction deposit degree measurement is checked, to ensure that the required filter performance (filtering out of the smallest particles to a required percentage rate) and air purity is achieved.

### **Aging measurements in continuous test**

In order to guarantee their very long life (from 60,000 to 100,000 kilometres), the filter paper and the sealing foam are tested in a continuous test for temperature resistance and filter performance.

### **Advantages of using Genuine BMW Air Filters**

- Matched to every BMW engine
- Featuring special resin-impregnated filter paper
- Temperature and moisture-resistant
- Optimal dust binding capacity and deposit degree up to 99%
- 60,000 or 100,000 km optimal filter performance
- Filter housing from fibreglass reinforced plastic

