



Genuine BMW Batteries with calcium technology

- **Maintenance free**
- **Long shelf life**
- **High power output**
- **Long operating life**
- **Protection against corrosion and internal shorts**
- **Stable at low and high temperatures**
- **Optimal safety against leakage of acid and deflagration (burning or detonation of explosive gases)**
- **Optimal recyclability**

Function in detail

- The battery itself is made from a plastic housing, which is divided in the interior into multiple cells each with a rated voltage of 2 volts.
- Every cell contains a positive and negative set of plates, which are isolated from each other by transfer plates: the separators.
- The batteries are filled with sulphuric acid which is 100% bound in non-woven glass material.
- The derived capacity of the battery is reduced under certain conditions:
 - high discharge voltages
 - high or low temperatures
 - increasing battery age
 - damage to the battery

Calcium technology

The conventional non-BMW 'hybrid' batteries that are still being offered on the open market use both negative, calcium alloyed (PbCa) and positive antimony alloyed (PbSb) lead grids. Due to the superior physical and chemical qualities a calcium alloy would be advantageous on the positive plate. However, this was not historically possible as calcium alloy lead plates corroded more quickly.

In a special process, BMW has made it possible to provide both poles with the same physical qualities. A special silver additive enabled the development of a grid for the positive plate as well as the negative grid, combining the advantages of the calcium alloy with high corrosion resistance.

Benefits

The ready-for-installation Genuine BMW Batteries with calcium technology offer the following advantages at an economical price:

- Maintenance free through lower water consumption.
- Long shelf life for standing and storage due to lower self-discharging.
- High performance through good charging and good cold starting performance.
- Long operating life (important for vehicles with high electrical power flow rates) through optimisation to cyclical loads.
- Protection against corrosion and internal shorts through high-grade alloys.
- Stability at low and high temperatures.
- Optimal safety against leakage of acid and deflagration through special cover design.
- Optimal recyclability due to the resistance of the robust, impact-proof, polypropylene housing against acid, benzyl, oil and salt water.
- Increased short circuit safety through the complex spot welding procedure by which connections through the cell walls are created.
- Prevention of deflagration of explosive gases in the battery, since a central degasification dissipates gases that arise in the battery.





Quality assurance

The higher quality of the individual battery components and a programme of comprehensive testing ensure that Genuine BMW calcium technology batteries meet and exceed high performance standards.

Tough real world and laboratory tests

The operational capability of the battery is an integral part of the pre-series, laboratory and real world tests that cover driving in all conditions, from the Polar Regions to the desert. The performance of the different batteries is tested repeatedly and their capacities are optimally matched to the respective model.

Continuous quality control

Continuous quality control during production according to EN ISO 9001 and DIN 50342, with regular checking of samples, reduces material and manufacturing errors to almost nil.

Advantages of Genuine BMW calcium technology batteries

- Maintenance free
- Longer shelf life for standing and storage – higher power output
- Long operating lifetime
- Greater protection against corrosion and internal shorts
- Stable at low and high temperatures
- Optimal safety against leakage of acid and deflagration
- Optimal recyclability
- Increased security against short circuits
- Prevents deflagration of explosive gases

