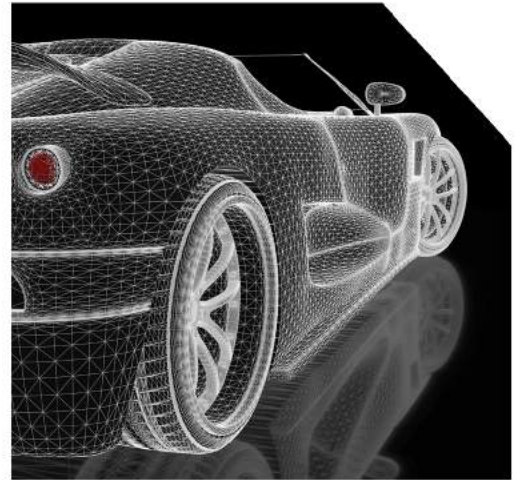
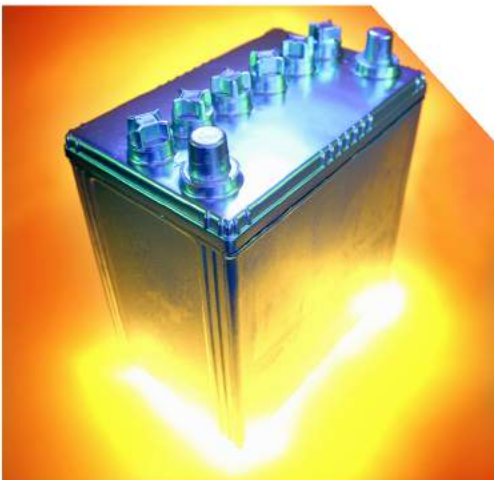


Formula **BT**TM
Advanced Lead-Acid Batteries





FormulaBT™: Superior Performance Graphite/Carbon for Energy Applications

Graphite/Carbon additives in Lead-acid battery electrodes for use in highly demanding operations such as High-Rate Partial State-of-Charge (HRPSoC)

FormulaBT™ (Battery Technology) are carbon and graphitic powders, developed and manufactured by Superior Graphite, primarily for use in the energy marketplace. **FormulaBT™** takes advantage of our proprietary Electro-Thermal Treatment/Purification Technology. This continuous high-temperature process exposes the raw materials, e.g. natural graphite, synthetic graphite and other carbonaceous products to temperatures approaching 3000°C, so that impurities including inorganic contaminants are evaporated. Combined with a variety of milling and classification techniques and processes, **FormulaBT™** provides the market with superior performance and high purity products.

FormulaBT™ Advantages:

Significant Cycle Life Improvement - Significant reduction of irreversible sulfation due to hindrance of lead sulfate crystal growth and uniform formation of lead sulfate across the negative plate under high-rate partial state-of-charge (HRPSoC) working conditions

Capacity Improvement - Improving high-rate capability and the charge efficiency of the negative plates through providing excellent electrical conductivity

Chemical Stability - No chemical interference with the electrode components

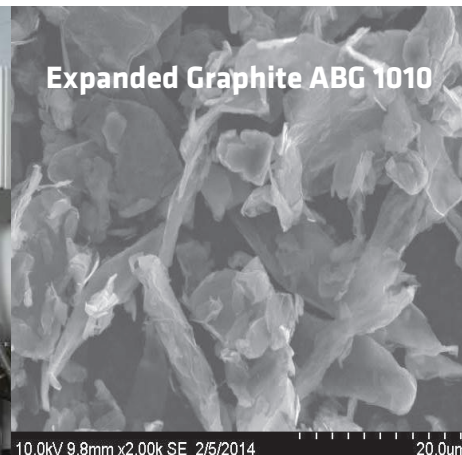
FormulaBT™ Characteristics:

High Purity - High consistent carbon content (>99.9%) with low moisture content, and ultra low metallic and non-metallic impurities

High Crystallinity - Near 100% crystallinity leads to excellent electrical conductivity, thermal conductivity and lubrication performance

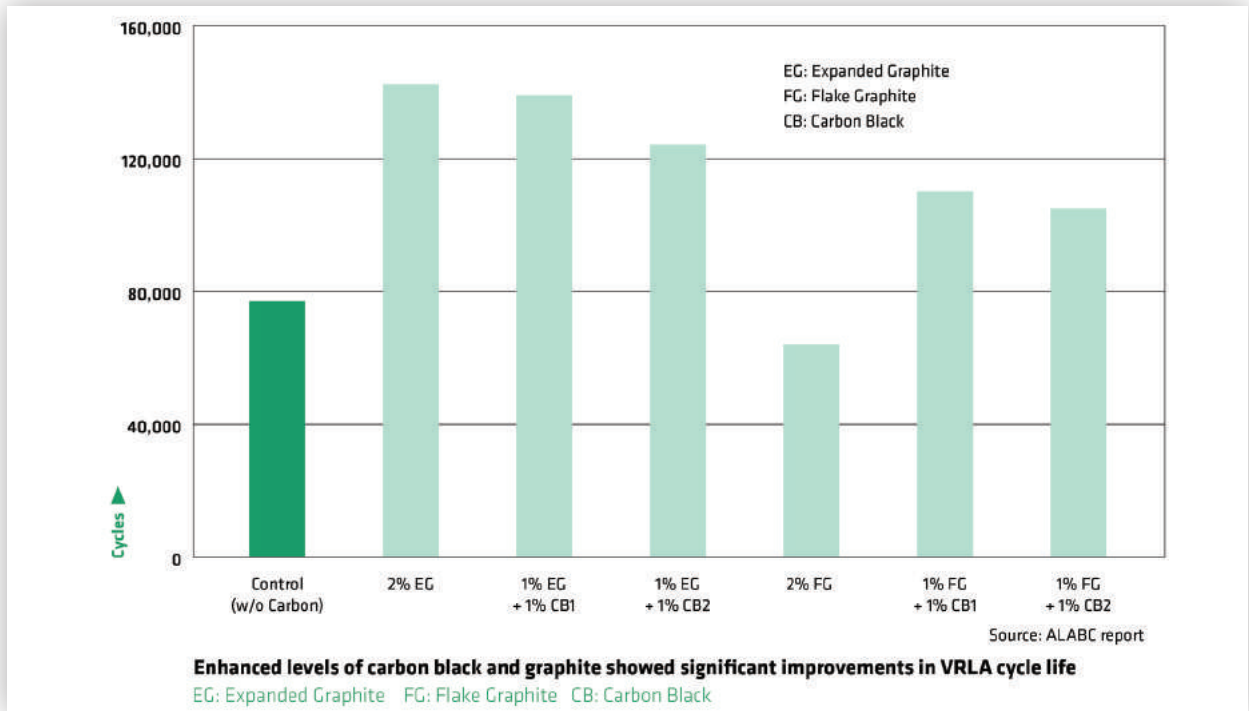
Defined Texture - Well-defined particle shape, surface area, as well as bulk density to maximize the nucleating effect for uniform formation of lead sulfate and hinder lead sulfate crystal growth

Well-Defined Particle Size Distribution - Predictability in performance and processability



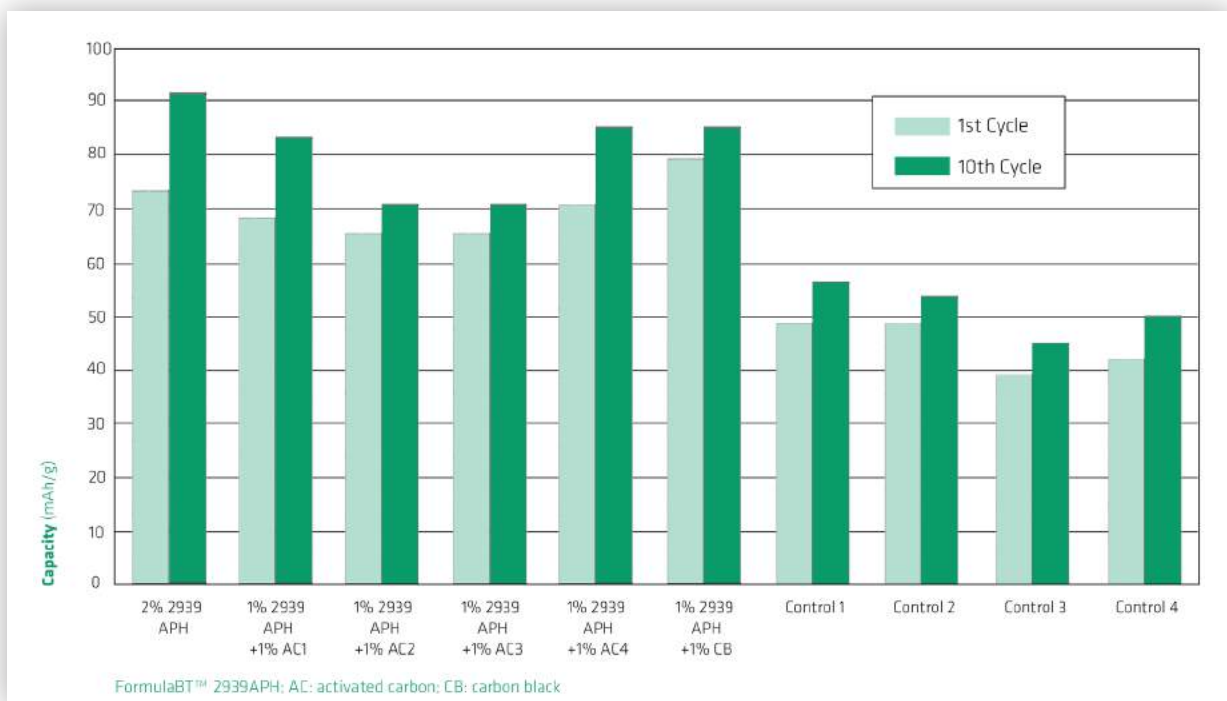
Enhanced levels of carbon black & graphite showed significant improvements in VRLA cycle life

Number of HRPSoC Micro Cycles Completed to 80% Nominal Capacity or Termination



FormulaBT™ significantly improves initial capacity under HRPSoC cycling conditions

Average 1st and 10th Cycle Capacity
(normalized for dry unformed negative active material weight)



FormulaBT™ Products

Graphite/Carbon additives in Lead-acid battery electrodes for use in highly demanding operations such as High- Rate Partial State-of-Charge (HRPSoC)

FormulaBT™ ABC series - Expanded flake graphite powders with high purity. Outstanding thermal and electrical conductivity enhancer for various battery systems (large surface area is in the range of ~20 m²/g), various particle sizes, well-defined particle size distribution. Excellent compressibility and lubricating properties.

FormulaBT™ LBG series - Natural flake graphite powders with high purity. Excellent electrical and thermal conductivity enhancer, various particle sizes down to 4 micron, well-defined particle size distribution. Especially developed for battery and fuel cell applications. Very high compressibility and lubricating properties.

FormulaBT™ 29xx series - Thermally-purified, natural flake graphite powders from 10 micron up to 800 micron. Conductivity additive for batteries and fuel cells.

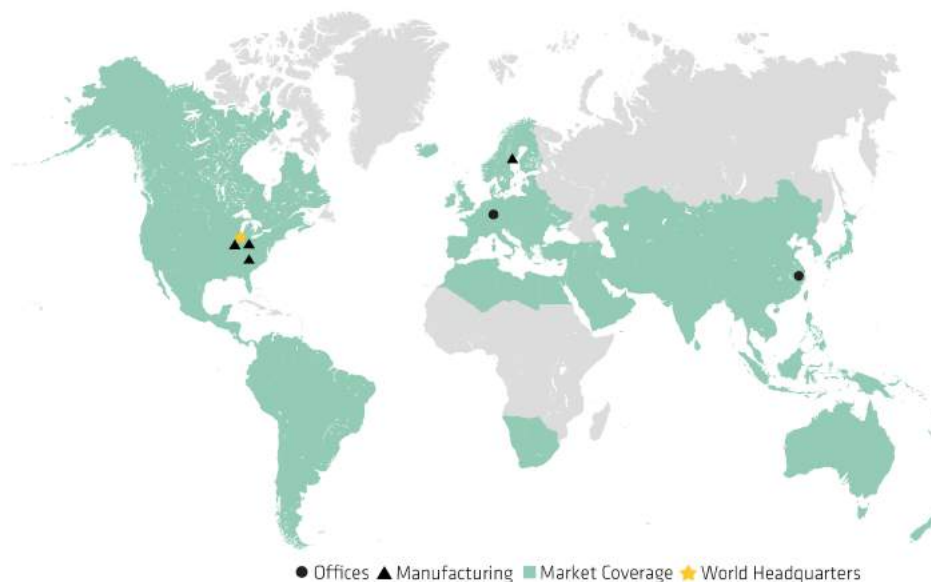
FormulaBT™ is more than just a high performance energy material. It's a philosophy:

- Our innovative research and development team provides superior solutions with customized products.
- Our dedicated production staff, combined with ISO 9001:2015 certified quality management systems ensure high quality products which meet agreed-upon specifications.
- Our extensive worldwide distribution network ensures supply chain efficiency.
- Our materials management experts secure the supply of high quality raw materials, and continuously evaluate new sources globally.



Our Mission:

We create value for our customers by providing SUPERIOR SOLUTIONS - utilizing our unique technologies, processes and talents - while contributing to the company's long-term success.



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