WHO IS SOLTEX?

Specialty Chemical Manufacturer & Distributor
- Founded in Houston, Texas in 1986
- Technical Support & Quality Assurance Labs

Operations and ASTM Laboratory Locations:
- Houston, Texas, USA
- Baytown, Texas, USA
- Bellville, Ontario, Canada
- Louisville, Kentucky, USA

Specialized Chemicals:
- Acetylene Black
- Dielectric Fluids
- Performance Chemical Additives
- Polyalphaolefins
- Polybutene
- Refrigeration Fluids
ACETYLENE BLACK

• Specialized Acetylene Black is characterized by:
  • High Structure, High Purity
  • High Surface Area
  • Higher Electrical Conductivity
  • Highest Degree of Aggregation
  • Crystalline Orientation
  • High Thermal Dissipation
  • Low Metal Content; most non-detectable

• Acetylene Black’s high purity, high structure, and electrically conductive properties make it a specialty carbon additive for battery applications.
• AB purity has a typical carbon content of 99.9%.
• Available in Powder and Granular Form
• Polybags and Paper Bag Packaging
ACETYLENE BLACK

How is Acetylene Black Manufactured?

\[ \text{C}_2\text{H}_2 \rightarrow 2\text{C} + \text{H}_2 + \text{Energy} \]

Continuous exothermic decomposition of acetylene at temperatures above 1500ºC without air. The yielded carbon is separated from the hydrogen, producing a high structure, high purity acetylene black. Acetylene can be sourced from either byproduct ethylene cracker or on-purpose calcium carbide.
ACETYLENE BLACK APPLICATIONS

**BATTERIES**
- Zinc carbon
- Zinc air
- Lithium-ion
- Lithium polymer
- Lithium sulfur dioxide
- Lithium thionyl chloride
- Sealed lead acid

**FUEL CELLS**
- Alkaline electrolyte
- Proton exchange membrane
- Solid polymer
- Phosphoric acid
- Molten carbonate
- Solid oxide

- AB is only 2-3% of all carbon black production.
- Approved in Military and Aerospace applications.
ACETYLENE BLACK
BENEFITS IN BATTERIES

- AB benefits from lower filler loading concentrations than carbon black.
- At equal loading concentrations, electrical conductivity is higher for AB than CB.
- AB’s high purity means extremely low metals content which equates to less side reactions and less formula disruptions.
- AB’s high surface area and high structure help mix and disperse in the preferred agglomerate form, forming a better electrically conductive network with many contact points.
- Acetylene black’s nano-size particles integrate with Graphite’s micro-size particles, improving mechanical performance and enhancing the electrically conductive network.
SOLTEX INC.
15 Years of Acetylene Black:
Warehoused in the United States
Distributed Domestically & Internationally
ASTM Quality Control Laboratory Tested

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