WHO IS SOLTEX?

Specialty Chemical Manufacturer & Distributor

• Founded in Houston, Texas in 1990
• Technical Support & Quality Assurance Labs

Operations and ASTM Laboratory Locations:

• Houston, Texas, USA
• Baytown, Texas, USA
• Bellville, Ontario, Canada

Specialized Chemicals:

• Acetylene Black
• Graphite
• 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
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.
Over 15 Years of Acetylene Black:
Warehoused in the United States
Distributed Domestically & Internationally
ASTM Quality Control Laboratory Tested

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