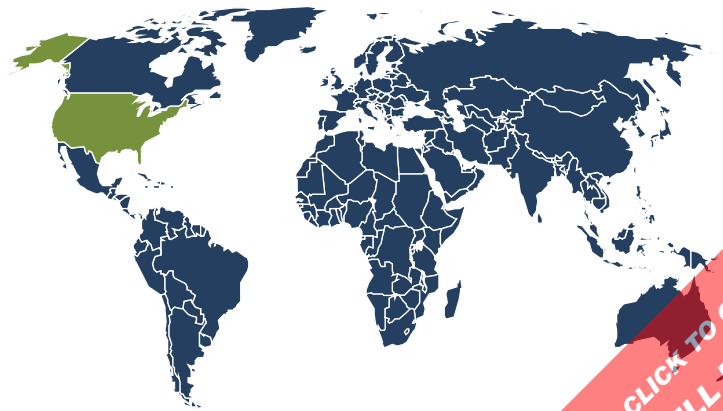




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Battery Materials: United States

December 2015



Highlights

Market Environment

Historical Trends | Key Economic Indicators | Technology Trends
Environmental and Regulatory Factors | NAFTA Overview | Battery Shipments Outlook

Segmentation and Forecasts

Products | Applications

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ABOUT THIS REPORT

Scope & Method

This report forecasts US battery material demand in US dollars at the manufacturers' level to 2019. Total demand is segmented by product in terms of:

- lead
- other metals such as steel, zinc, and lithium
- chemicals
- polymers
- carbon/graphite
- other products such as silicas, glass fibers, and ceramic materials.

Excluded from the scope of this report are discrete, individually distinct fabricated devices – for example, battery separators – that are incorporated in the final product, although the raw materials used in their construction – such as polymers and silicas – are covered here. Fuels and materials used in the manufacture of ancillary products, such as battery chargers and standalone power conditioning equipment, are also excluded. The terms “battery” and “cell” are also used interchangeably, each referring to both single-cell (AA batteries, for instance) and multi-cell (such as nine-volt batteries) units.

Total demand is also segmented by application as follows:

- alkaline
- other primary batteries such as zinc, primary lithium, and silver oxide
- lead-acid
- other secondary batteries such as lithium-based, nickel-based, and sodium-sulfur.

To illustrate historical trends, total demand is provided in an annual series from 2004 to 2014; the various segments are reported at five-year intervals for 2009 and 2014.

This report quantifies trends in various measures of growth. Growth (or decline) expressed as an average annual growth rate (AAGR) is the least squares growth rate, which takes into account all available datapoints over a period. Growth calculated as a compound annual growth rate (CAGR) employs, by definition, only the first and last datapoints over a period. The CAGR is used to describe forecast growth, defined as the expected trend beginning in the base year and ending in the forecast year. Readers are encouraged to consider historical volatility when assessing particular annual values along the forecast trend, including in the forecast year.

Key macroeconomic indicators are also provided at five-year intervals with CAGRs for

the years corresponding to other reported figures. Other various topics, including profiles of pertinent leading suppliers, are covered in this report. A full outline of report items by page is available in the [Table of Contents](#).

Sources

Battery Materials: United States (FF45047) is based on [World Battery Materials](#), a comprehensive industry study published by The Freedonia Group in December 2015. Reported findings represent the synthesis and analysis of data from various primary, secondary, macroeconomic, and demographic sources including:

- firms participating in the industry, and their suppliers and customers
- government/public agencies
- national, regional, and international non-governmental organizations
- trade associations and their publications
- the business and trade press
- indicator forecasts by The Freedonia Group
- the findings of other industry studies by The Freedonia Group.

Specific sources and additional resources are listed in the [Resources](#) section of this publication for reference and to facilitate further research.

Industry Codes

The topic of this report is related to the following industry codes:

NAICS/SCIAN 2007		SIC	
North American Industry Classification System		Standard Industry Codes	
325188	All Other Basic Inorganic Chemical Mfg	2819	Industrial Inorganic Chemicals, NEC
335911	Storage Battery Mfg	3629	Electrical Industrial Apparatus, NEC
335912	Primary Battery Mfg	3691	Storage Batteries
335999	All Other Miscellaneous Electrical Equipment and Component Mfg	3692	Primary Batteries, Dry and Wet

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RESOURCES

The Freedonia Group

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3350 <i>World Battery Materials</i> , December 2015	see study contents
Related Industry Studies	
3402 <i>World Graphene</i> , April 2016	see study contents
3331 <i>World Lithium</i> , September 2015	see study contents
3309 <i>World Batteries</i> , July 2015	see study contents
3278 <i>Fluoropolymers</i> , June 2015	see study contents
3256 <i>Electric Power Transmission & Distribution Equipment</i> , February 2015	see study contents
3241 <i>World Power Tools</i> , January 2015	see study contents
Related Focus Reports	
<i>Batteries: United States</i>	see report contents
<i>Fluoropolymers: United States</i>	see report contents
<i>Lead: United States</i>	see report contents
<i>Motor Vehicles: United States</i>	see report contents
<i>World Batteries</i>	see report contents
<i>World Battery Materials</i>	see report contents
<i>World Graphite</i>	see report contents
<i>World Hybrid & Electric Vehicles</i>	see report contents
<i>World Lithium</i>	see report contents
Freedonia Custom Research	see capabilities

Trade Publications

<i>Batteries and Energy Storage Technology</i>	www.bestmag.co.uk
<i>Batteries International</i>	www.batteriesinternational.com
<i>Battery Power</i>	www.batterypoweronline.com
<i>EDN</i>	www.edn.com
<i>Energy Storage Journal</i>	www.energystoragejournal.com
<i>IHS Chemical Week</i>	www.chemweek.com

Agencies & Associations

Battery Council International	http://batteryCouncil.org
Battery and Electrical Specialists Association	www.besabattery.com
NAATBatt International	http://naatbatt.org
United States Census Bureau	www.census.gov
United States Department of Transportation	www.transportation.gov
United States International Trade Commission	www.usitc.gov

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