

Batteries



May 2009

US\$495

Essential sourcing intelligence for buyers

China manufacturer profiles

Detailed profiles of 24 verified suppliers and contact details of an additional 17 exporters

Product & price trends

Prices and specifications of 89 top-selling export products

Supply centers & market trends

Coverage of leading and emerging supply centers, plus insight into capacity, output and R&D

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BATTERIES

Supplier capability in China

EXECUTIVE SUMMARY

China is one of the world's largest battery suppliers with as much as a 40 percent share of global output. Suppliers in the country produce the entire range of cells and battery packs, with alkaline, lithium, sealed lead-acid, NiCd and NiMH units leading the line.

Makers are banking on strong demand in the mobile phone, laptop, digital still and video camera, power tool and in-car device industries.

Many companies are expanding their reach by exploring new markets in the hybrid electric vehicle, e-bike and medical and industrial equipment segments.

China supplies two-thirds of the world's alkaline batteries. A growing number of companies are releasing models that can operate at high temperature and have a longer life span.

Lithium battery makers are capitalizing on market opportunities created by the spate of laptop and mobile phone battery recalls. The product selection consists of Li-ion, Li-polymer, LiFe and LiSOCl types. Suppliers forecast output volume will grow by 20 percent annually through 2011.

The sealed lead-acid line caters mostly to the midrange and low-end markets. Most battery types are available from China, although the mainstream is driven by valve-regulated and gel models.

The world's biggest production hub for NiCd batteries, China is also one of the few remaining countries that export the products. Most units are for the low-end market.

Suppliers of NiMH batteries are emphasizing power-packed, safer-to-use and "greener" models. To keep their competitive edge, makers are releasing products with higher nominal capacity, lower self-discharge rate, wider operating temperature and extended life cycle.

The following are some of the key trends observed in China's battery industry:

- Product development efforts are centered on enhancing safety and developing environment-friendly batteries. Makers are exploring alternative, more-stable materials and components.
- Many suppliers direct R&D efforts toward increasing the nominal capacity and life span of their batteries.
- Companies are improving their operating efficiency to reduce overhead and buffer thinning margins.
- By turning out more value-added and "green" products, suppliers hope to strengthen their position in the global market. Many are looking to the EU and North America to drive exports in the next six to 12 months.
- Price competition remains the industry's biggest challenge. Even so, some companies are planning to raise their quotes to cushion rising production costs. Increases will, however, be marginal as companies try to maintain competitiveness.

This report covers alkaline, lithium, sealed lead-acid, NiCd and NiMH batteries and packs. The supplier survey was conducted on manufacturers of these products.

The Industry Overview section discusses developments in China's supply market. It also mentions key trends and product development priorities in coming months.

China has more than 2,000 suppliers of all types of batteries and packs. The majority of companies are based in Guangdong province, which accounts for more than 50 percent of total output.

Hubei, Zhejiang, Jiangsu, Liaoning, Fujian, Henan, Shandong and Heilongjiang provinces are also key sourcing centers for batteries. Shanghai and Tianjin likewise have a good number of suppliers.

In this report

- 24 in-depth company profiles
- 17 additional suppliers
- 89 top-selling export products
- Supplier demographics
- Supplier survey
- Industry statistics & charts

METHODOLOGY

To produce this report, Global Sources surveyed a wide range of suppliers. Rather than focus simply on high-profile makers, we compiled a representative sample of large, midsize and emerging manufacturers. All profiled companies are export-oriented professional suppliers that may or may not be clients of Global Sources.

The selection of suppliers is designed to reflect the composition of the industry in China in terms of geographic spread, business type and company ownership.

For in-depth company profiles, our research teams interviewed senior executives and export managers who discussed their recent performance and provided price, R&D, production and export forecasts for the next 12 months. The interviews were done in person, by phone or e-mail.

In each case, companies were required to answer specific questions designed to verify their manufacturing and export credentials, including their production and export statistics, and a breakdown of exports by product type and market. Our production checklist details the product-specific manufacturing capability of each supplier.

All profiled suppliers participated in a survey designed to provide insight into product and price trends, and challenges facing the industry in the next 12 months. All survey questions are single choice. Results were calculated based on the actual number of valid responses to each question.

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INDUSTRY OVERVIEW

China supplies 20 to 40 percent of the world's battery requirement, making it one of the biggest manufacturing hubs for this line alongside Japan and South Korea. The country has more than 2,000 makers offering the entire range of battery chemistries, with output fronted by alkaline, lithium, sealed lead-acid, NiCd and NiMH units.

Production and exports are driven by strong demand in the mobile phone, laptop, digital still and video camera, power tool and in-car device segments. Market momentum is also inching up in the hybrid electric vehicle or HEV, e-bike, and medical and industrial sectors.

Makers in China specialize in one type or offer a range of battery chemistries. Regardless of product focus, the majority turns out both batteries and packs in primary and secondary models.

Although foreign-funded companies continue to dominate, China-owned makers have a secure foothold in the low-end and midrange segments. Suppliers are confident they can keep their price advantage in these sectors

over others in Asia as a highly localized supply chain allows them to offer rock-bottom quotes and a strong export presence affords quick order delivery.

Makers enjoyed record-high production volume and sales in 2004 and 2005. Growth further accelerated in 2006-07 with the spate of laptop battery recalls that cracked the market wide open for China-made replacements. The recent financial slump and intensifying competition, however, are expected to dampen market outlook and slow down momentum.

The "green" trend likewise poses a threat to the industry at large, and in this regard wastewater disposal and recycling are the biggest challenges for most makers. The emergence of environment-friendly photovoltaic power sources is also a potential cause for concern. Makers believe, however, that these alternatives will not likely make considerable inroads into the industry for years to come as costs still outweigh profits.

Many suppliers admit they lack the core technologies needed for the

Supplier summary

Suppliers surveyed	24
Export sales	\$504.5mn
Export ratio	69%
OEM business	48%
Capacity utilized	74%
Annual R&D spending	\$23.6mn
Full-time employees	29,646

Data: All surveyed suppliers

development of battery manufacturing in the country. The cost of acquiring high and new technologies standard among foreign makers is still inhibitive, particularly for those catering to the entry-level segment. As such, most product development activities are centered on capacity optimization and process streamlining.

In addition to the technology barrier, makers face rising manufacturing overhead due to inflation and higher material and labor costs. Because of this, profit margins continue to decline despite stable shipment volumes. To boost sales, many are negotiating for their customers to shoulder some of the losses borne of the exchange rate flux.

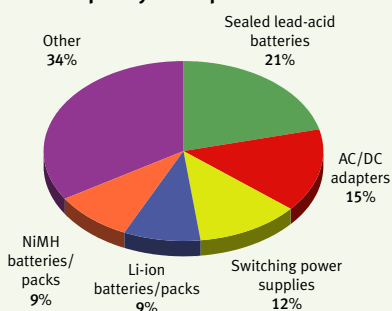
Global Sources online metrics

Power supplies, batteries & accessories

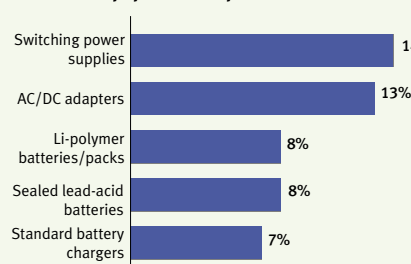
Online metrics are taken from buyer and supplier activity in the featured product group on www.globalsources.com in the month preceding publication of this update.

- **Buyer requests** track total inquiries from our worldwide community of more than 750,000 buyers.
- **Product profiles** represent the total number of unique products available from suppliers in our online catalogs.
- **New product postings** indicate the number of new product profiles added by suppliers during the period.

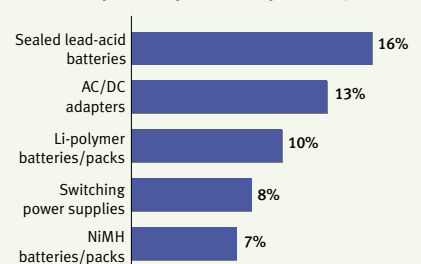
Top buyer requests



Top product profiles



Top new product postings



Percent of all online activity for this product group

Alliance International Electronics Ltd

Mainland China-owned Alliance generates 90 percent of its total annual sales from batteries. Its product range consists of lithium, NiCd and NiMH models, with lithium batteries accounting for 90 percent of shipments. Total export sales from the line reached \$9 million in 2008.

Its export markets are North America, the EU, Eastern Europe, the Asia-Pacific region and the Middle East. The maker plans to boost shipments to North America this year. Sales are expected to increase by more than 20 percent in coming months.

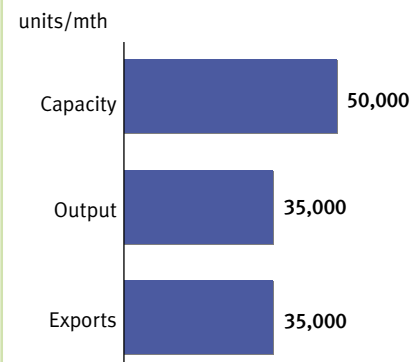
Alliance exports an average of 35,000 batteries a month. Its 4,000sqm factory in Shenzhen, Guangdong province has the capacity for 50,000 units a month, but uses only 70 percent of this capacity.

The supplier's facility in Shenzhen has 200 workers, including 15 QC personnel and 20 R&D and design staff. It spends \$500,000 on R&D projects each year.

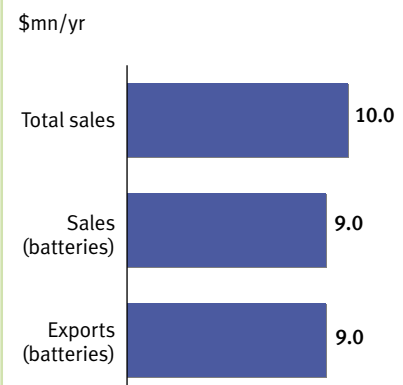
Alliance will keep its prices steady in coming months. The company also supplies chargers, GSM phones, laptop AC adapters and mobile phone cases.

Profile

Production



Sales



Contact details

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Company facts

Year established	1999
Business type	Manufacturer
Company ownership	Mainland China-owned
Head office location	Shenzhen (Guangdong)
Number of factories	1
Factory location(s)	Shenzhen (Guangdong)
Total factory area	4,000sqm
No. of full-time employees	200
No. of R&D/design staff	20
No. of QC staff	15
Annual sales (all products)	\$10.0mn
Annual R&D spending	\$500,000
ISO certification	Yes

Sales & output: Batteries

Annual sales	\$9.0mn
Share of total sales	90%
Annual export sales	\$9.0mn
Total monthly capacity	50,000 units
Average monthly output	35,000 units
Capacity utilized	70%
Average monthly exports	35,000 units
Export ratio	100%
OEM % of exports	80%
ODM % of exports	20%
OBM % of exports	—
Major customer	Targus (US)
Other products made	Chargers, GSM phones, laptop AC adapters, mobile phone cases

Capability

Production checklist

Anode/metal parts making	Yes
Battery case making	Yes
Electrode terminal construction/assembly	No
Electrolyte injection/flooding	No
Plate insertion	No
Plastic injection	Yes
Final assembly	Yes
Battery sorting and grading	Yes

Exports by product

Alkaline	—
Lithium (Li-ion, Li-polymer, LiFe, LiSOCl)	90%
NiCd	3%
NiMH	7%
Sealed lead-acid	—

Exports by market

North America	45%
European Union	35%
Europe (non-EU)	10%
Asia-Pacific	5%
Middle East	5%
Other	—

Outlook

- **Export prices**
Stay the same
- **Export sales**
Increase more than 20%
- **Target market**
North America
- **Capital expenditure**
No increase
- **Major challenge**
Labor cost
- **Export capability**
Improve operating efficiency
- **R&D focus**
Increase capacity

Popular export models



Lithium (Li-ion, Li-polymer, LiFe, LiSOCl)

Model	NP-F970
Minimum order	5 units
Packaging type	White box or blister card
Delivery time	10 days
Indicated price	\$8

Description: Li-ion secondary battery pack; replacement for Sony camcorder models NP-F330, NP-F530, NP-F550, NP-F570, NP-F770, NP-F930, NP-F930/B, NP-F950, NP-F950/B, NP-F960, NP-F970, NP-F970/B; 7800mAh capacity; -10 to 45 C operating temperature; 7.2V



NiMH

Model	Bosch22612
Minimum order	5 units
Packaging type	Brown box
Delivery time	10 days
Indicated price	\$10

Description: NiMH secondary battery pack; replacement for Bosch power tools; 3000mAh capacity; -10 to 45 C operating temperature; 12V; 106.5x86x111.5mm, 780g



Lithium (Li-ion, Li-polymer, LiFe, LiSOCl)

Model	FMVNBP137
Minimum order	1 unit
Packaging type	Brown box
Delivery time	10 days
Indicated price	\$20

Description: Li-ion secondary battery pack; replacement for Fujitsu FMV-Biblo Loox T50M, T70, Lifebook P7120; 7800mAh capacity; -10 to 45 C operating temperature; 7.2V; 209.25x45.85x20.75mm, 300g

PRODUCT GALLERY

Alkaline



Brighter Battery
 (profile page 32)
Model: LR6
Minimum order: 50,000 units
Packaging type: Blister card
Delivery time: 10 days
Indicated price: \$0.09
Description: Primary battery; for high-drain, high-tech devices; 1.5V; AA x AM3 form factor; mercury-, cadmium-free; aluminum metallic foil jacket



Desay
 (profile page 34)
Model: LR6-C4
Minimum order: 10,000 units
Packaging type: Shrink pack
Delivery time: 15 days
Indicated price: \$0.10
Description: Primary battery; for CD and MD players, electronic toys, calculators, cameras, laptops; 0 to 45 C operating temperature; 1.5V, 0.75 and 0.8V cut-off voltage; 14.5x50.5mm, 23.5g



HK Uklear
 (profile page 44)
Model: Alkaline battery
Minimum order: 100,000 units
Packaging type: Blister card
Delivery time: 20 days
Indicated price: •
Description: Primary battery; for digital products; AA, AAA, AM1, 6LR61, AM3 form factors



Shenzhen Kingkong
 (profile page 58)
Model: LR6
Minimum order: 1,000 units
Packaging type: Blister card
Delivery time: 7 days
Indicated price: \$0.11
Description: Primary battery; 2200mAh capacity; 18 to 22 C operating temperature; 1.5V; AA, AM3 form factors; 13.5x49.2mm, 24g; 17.8hr discharging; Zn-MnO₂ chemistry



Shenzhen Kingkong
 (profile page 58)
Model: R6P
Minimum order: 1,000 units
Packaging type: Blister
Delivery time: 7 days
Indicated price: \$0.05
Description: Primary battery; 720mAh capacity; 18 to 22 C operating temperature; 1.5V; AA, UM-3 form factors; 13.5x49.2mm, 15g; 90min discharge time; Zn-MnO₂ chemistry



Shenzhen Pkcell
 (profile page 62)
Model: R6P
Minimum order: 10,000 units
Packaging type: Blister card
Delivery time: 10 days
Indicated price: \$0.10
Description: Primary battery; for DVD players, PMPs, digital cameras, shavers, cordless phones; up to 20 C operating temperature; 1.5V; AA, R6P, UM-3 form factors; 50.5x14.5mm, 21g; 350min life span

• Information not disclosed

