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[Table of Contents 2](#)

[List of Tables & Charts 3](#)

[Study Overview 4](#)

[Sample Text, Table & Chart 5](#)

[Sample Profile, Table & Forecast 6](#)

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# World Aluminum

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Industry Study with Forecasts for **2017 & 2022**

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Study #3070 | October 2013 | \$6100 | 317 pages

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## Table of Contents

### EXECUTIVE SUMMARY

### MARKET ENVIRONMENT

General .....	4
World Population Outlook .....	4
World Economic Overview .....	6
Recent Historical Trends .....	6
World Economic Outlook .....	9
World Manufacturing Outlook .....	12
World Building Construction Outlook .....	14
World Motor Vehicle Outlook .....	16
World Packaging Industry Outlook .....	19
World Food & Beverage Value Added Outlook .....	23
World Electric Power Generation Outlook .....	26
Pricing Trends .....	27
Aluminum Recycling .....	29
Competing Materials .....	31
Fuel Efficiency Standards .....	33

### WORLD BAUXITE & ALUMINA SUPPLY

General .....	35
Bauxite Reserves by Country .....	36
Bauxite Production by Country .....	37
Alumina Production by Country .....	40

### WORLD ALUMINUM SUPPLY & DEMAND

General .....	43
Demand by Region .....	44
Demand by Market .....	47
Construction .....	48
Motor Vehicles .....	50
Packaging .....	53
Electric Power .....	57
Other Markets .....	59
World Aluminum Production by Region .....	61
World Primary Aluminum Production Capacity .....	64
International Trade .....	65

### NORTH AMERICA

General .....	68
Aluminum Supply & Demand .....	69
Aluminum Demand by Market .....	70
United States .....	72
Canada .....	78
Mexico .....	83

### WESTERN EUROPE

General .....	88
Aluminum Supply & Demand .....	89
Aluminum Demand by Market .....	91
France .....	92
Germany .....	97
Italy .....	102
Spain .....	107
United Kingdom .....	111
Other Western Europe .....	115

### ASIA/PACIFIC

General .....	120
Aluminum Supply & Demand .....	121
Aluminum Demand by Market .....	123
Australia .....	125
China .....	129
India .....	136
Indonesia .....	142
Japan .....	147
South Korea .....	151
Thailand .....	156
Other Asia/Pacific .....	160

### OTHER REGIONS

Central & South America .....	165
Aluminum Supply & Demand .....	166
Aluminum Demand by Market .....	167
Argentina .....	169
Brazil .....	172
Other Central & South America .....	176
Eastern Europe .....	180
Aluminum Supply & Demand .....	181
Aluminum Demand by Market .....	182
Russia .....	184
Other Eastern Europe .....	188
Africa/Mideast .....	192
Aluminum Supply & Demand .....	193
Aluminum Demand by Market .....	194
Iran .....	196
Turkey .....	200
Other Africa/Mideast .....	204

### INDUSTRY STRUCTURE

General .....	210
Market Share .....	211
Acquisitions & Divestitures .....	215
Cooperative Agreements .....	218
Manufacturing & Development .....	227

### COMPANY PROFILES

Alcoa Incorporated .....	229
Aluminio Brasileiro .....	237
Aluminium Bahrain .....	239
Aluminum Corporation of China .....	240
Ball Corporation .....	244
BHP Billiton .....	248
Century Aluminum .....	251
China Hongqiao .....	254
China Power Investment .....	256
Crown Holdings .....	258
Dubai Aluminium .....	261
East Hope Group .....	263
Glencore International .....	264
Hangzhou Jinjiang Group .....	266
Hindalco Industries .....	267
JW Aluminum .....	273
Kaiser Aluminum .....	274
Mubadala Development .....	276
Nanshan Group .....	278
National Aluminium .....	280
Norsk Hydro .....	282
Orkla ASA .....	290
Rexam plc .....	294
Rio Tinto Group .....	297
Shandong Xinfu Aluminum and Electricity .....	306
United Company RUSAL .....	309
Vale SA .....	314
Vedanta Resources .....	316

## List of Charts

### MARKET ENVIRONMENT

World Aluminum Price, 2002-2012 .....	29
---------------------------------------	----

### WORLD BAUXITE & ALUMINA SUPPLY

World Alumina Production, 2012 .....	42
--------------------------------------	----

### WORLD ALUMINUM SUPPLY & DEMAND

World Aluminum Demand by Region, 2012 .....	47
---------------------------------------------	----

### INDUSTRY STRUCTURE

World Primary Aluminum Market Share, 2012 .....	213
-------------------------------------------------	-----

## List of Tables

### EXECUTIVE SUMMARY

1 Summary Table..... 3

### MARKET ENVIRONMENT

1 World Population by Region ..... 6  
 2 World Gross Domestic Product by Region .. 12  
 3 World Manufacturing Value Added by Region..... 14  
 4 World Building Construction Spending by Region ..... 16  
 5 World Motor Vehicle Production by Region ..... 19  
 6 World Packaging Demand by Region ..... 23  
 7 World Food & Beverage Manufacturing Value Added by Region ..... 25  
 8 World Electric Power Generation by Region ..... 27

### WORLD BAUXITE & ALUMINA SUPPLY

1 World Bauxite Reserves by Country, 2012 ..... 37  
 2 World Bauxite Production by Country, 2002-2012 ..... 40

### WORLD ALUMINUM SUPPLY & DEMAND

1 World Aluminum Demand by Region ..... 46  
 2 World Aluminum Demand by Market..... 48  
 3 World Construction Market for Aluminum by Region ..... 50  
 4 World Motor Vehicle Market for Aluminum by Region ..... 53  
 5 World Packaging Market for Aluminum by Region ..... 57  
 6 World Electric Power Market for Aluminum by Region ..... 59  
 7 Other Markets for Aluminum by Region .... 61  
 8 World Aluminum Production by Region & Type..... 63  
 9 World Primary Aluminum Production Capacity by Company, Year-End 2012 ... 65  
 10 World Aluminum Net Exports by Region ... 67

### NORTH AMERICA

1 North America: Aluminum Supply & Demand..... 70

2 North America: Aluminum Demand by Market ..... 72  
 3 United States: Aluminum Supply & Demand..... 75  
 4 United States: Aluminum Demand by Market ..... 78  
 5 Canada: Aluminum Supply & Demand..... 81  
 6 Canada: Aluminum Demand by Market..... 82  
 7 Mexico: Aluminum Supply & Demand ..... 85  
 8 Mexico: Aluminum Demand by Market..... 87

### WESTERN EUROPE

1 Western Europe: Aluminum Supply & Demand..... 90  
 2 Western Europe: Aluminum Demand by Market ..... 92  
 3 France: Aluminum Supply & Demand..... 95  
 4 France: Aluminum Demand by Market ..... 97  
 5 Germany: Aluminum Supply & Demand... 100  
 6 Germany: Aluminum Demand by Market.. 102  
 7 Italy: Aluminum Supply & Demand ..... 105  
 8 Italy: Aluminum Demand by Market..... 106  
 9 Spain: Aluminum Supply & Demand..... 109  
 10 Spain: Aluminum Demand by Market..... 110  
 11 United Kingdom: Aluminum Supply & Demand..... 113  
 12 United Kingdom: Aluminum Demand by Market ..... 114  
 13 Other Western Europe: Aluminum Supply & Demand..... 117  
 14 Other Western Europe: Aluminum Demand by Market ..... 119

### ASIA/PACIFIC

1 Asia/Pacific: Aluminum Supply & Demand..... 123  
 2 Asia/Pacific: Aluminum Demand by Market ..... 125  
 3 Australia: Aluminum Supply & Demand .. 128  
 4 Australia: Aluminum Demand by Market ..... 129  
 5 China: Aluminum Supply & Demand..... 133  
 6 China: Aluminum Demand by Market..... 136  
 7 India: Aluminum Supply & Demand ..... 139  
 8 India: Aluminum Demand by Market ..... 142  
 9 Indonesia: Aluminum Supply & Demand . 145  
 10 Indonesia: Aluminum Demand by Market ..... 146  
 11 Japan: Aluminum Supply & Demand ..... 149  
 12 Japan: Aluminum Demand by Market ..... 151  
 13 South Korea: Aluminum Supply & Demand..... 154

14 South Korea: Aluminum Demand by Market ..... 155  
 15 Thailand: Aluminum Supply & Demand... 158  
 16 Thailand: Aluminum Demand by Market.. 159  
 17 Other Asia/Pacific: Aluminum Supply & Demand..... 162  
 18 Other Asia/Pacific: Aluminum Demand by Market ..... 164

### OTHER REGIONS

1 Central & South America: Aluminum Supply & Demand..... 167  
 2 Central & South America: Aluminum Demand by Market ..... 168  
 3 Argentina: Aluminum Supply & Demand . 170  
 4 Argentina: Aluminum Demand by Market ..... 171  
 5 Brazil: Aluminum Supply & Demand..... 174  
 6 Brazil: Aluminum Demand by Market..... 176  
 7 Other Central & South America: Aluminum Supply & Demand..... 178  
 8 Other Central & South America: Aluminum Demand by Market..... 179  
 9 Eastern Europe: Aluminum Supply & Demand..... 182  
 10 Eastern Europe: Aluminum Demand by Market ..... 183  
 11 Russia: Aluminum Supply & Demand..... 186  
 12 Russia: Aluminum Demand by Market..... 187  
 13 Other Eastern Europe: Aluminum Supply & Demand..... 190  
 14 Other Eastern Europe: Aluminum Demand by Market ..... 191  
 15 Africa/Mideast: Aluminum Supply & Demand..... 194  
 16 Africa/Mideast: Aluminum Demand by Market ..... 196  
 17 Iran: Aluminum Supply & Demand..... 198  
 18 Iran: Aluminum Demand by Market..... 200  
 19 Turkey: Aluminum Supply & Demand..... 202  
 20 Turkey: Aluminum Demand by Market..... 203  
 21 Other Africa/Mideast: Aluminum Supply & Demand..... 207  
 22 Other Africa/Mideast: Aluminum Demand by Market ..... 209

### INDUSTRY STRUCTURE

1 World Primary Aluminum Production by Company, 2012 ..... 211  
 2 Selected Acquisitions & Divestitures..... 217  
 3 Selected Cooperative Agreements..... 220

*Over half of additional world aluminum volume demand in 2017 will be accounted for by China, a significant producer that ran a large trade surplus of aluminum in 2012.*

## World demand to rise 5.8% annually through 2017

World demand for aluminum (primary and secondary/recycled) is projected to expand 5.8 percent per year through 2017 to 82.5 million metric tons. Over half of additional volume demand in 2017 will be accounted for by China. The country is also a significant aluminum producer and ran a large trade surplus of of aluminum in 2012. In fact, China's trade surplus and an associated global supply glut were largely to blame for recent drops in global aluminum prices.

## Construction to remain largest market

Due primarily to the massive market in China, construction will remain the largest market for aluminum, with gains benefiting from a recovery in the housing sectors of a number of developed nations as well as rapid increases in construction spending in the developing world as a result of strong economic growth and urbanization. If excluding China, the motor vehicle market is the world's largest user of aluminum. In most countries, motor vehicles account for a greater share of aluminum use than construction applications.

## Growth in motor vehicle market to surpass average

Aluminum use in the motor vehicle market will see gains in excess of the overall market and will continue to

## World Aluminum Demand, 2017 (82.5 million metric tons)



benefit as car manufacturers strive to increase the fuel efficiency of their fleets by reducing the average weight of each vehicle. Aluminum is significantly lighter than steel, and aluminum use per motor vehicle is expected to rise through 2017.

Motor vehicle aluminum demand in developing countries will also benefit from the fact that current car ownership rates are low, leaving plenty of room for future growth. The world's major motor vehicle manufacturers will continue to set up new plants in China, India, and other developing countries with booming motor vehicle markets, resulting in increasing sales of aluminum in those countries.

## Packaging uses to benefit from convenience foods

Aluminum use in packaging will advance due to rapid proliferation of processed food and beverage products in developing countries. Healthy economic growth combined with the increasing presence of women in the workforce in these countries will result in a preference for convenience packaged food and beverage items. Aluminum cans' popularity benefits from their excellent rates of recycling around the world. Intense competition from other materials such as plastics and glass in the packaging sector will prevent faster gains for aluminum demand.

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## Sample Text, Table & Chart

### ASIA/PACIFIC

Construction will remain the largest market, despite po average (albeit still faster than the world average) gains thro Between 2002 and 2012, construction related aluminum den China quadrupled in size. During that time the Chinese gov heavily investing in the local construction sector, and for mu past decade China consistently accounted for at least one-ha demand for construction related materials such as cement.

Aluminum windows are especially popular in China. A also finds significant use in doors, siding, and roofing in Chi to nowhere near an extent as in windows. China's aluminu nonbuilding construction sector is also very significant, with especially active in the construction of new high-speed railro ports, and other infrastructure.

The motor vehicle market will post the fastest gains thr The local motor vehicle industry will see output grow from units i in 2017. While in 2012 the average amount of aluminum used in a vehicle produced in China was only 104 kilograms (the developed world), it will rise to 119 kilograms. Manufacturers in China (especially Ger man c produce newer models with a much greater use of aluminum. Chinese manufacturers are still lagging in that area due to lack of experience.

Packaging related aluminum demand in China will also outpacing the overall local aluminum market. Healthy econo combined with the increasing presence of women in the wor result in a boost in sales of convenience packaged food and l products. In 2012, China produced an estimated 13 million c cans, well behind the US and Brazil in importance, suggestin growth potential. China is even less significant in aluminu

134

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TABLE VII-6

CHINA: ALUMINUM DEMAND BY MARKET  
(thousand metric tons)

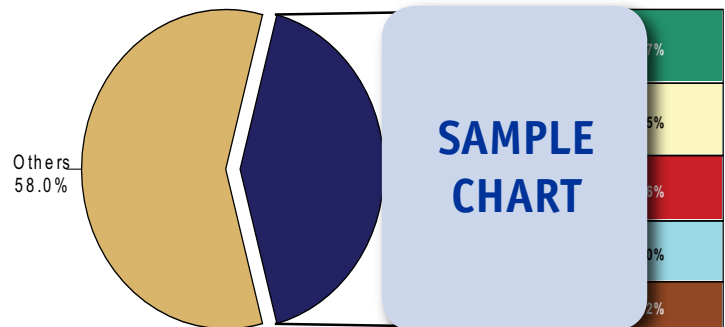
Item	2002	2007	2012	2017	2022
Motor Vehicle Production (000 units) ? kg aluminum/vehicle					
Building Construction (bil 2011\$) metric tons alum/mil \$ construction					
Food/Beverage Value Added (bil 2011\$) metric tons aluminum/mil \$ F&B					
Electric Power Generation (bil kWh) kgs aluminum/kWh electricity					
Aluminum Demand					
Motor Vehicle					
Construction					
Packaging					
Electric Power					
Other					

SAMPLE TABLE

SAMPLE TEXT

CHART IX-1

WORLD PRIMARY ALUMINUM MARKET SHARE, 2012  
(43.5 million metric tons)

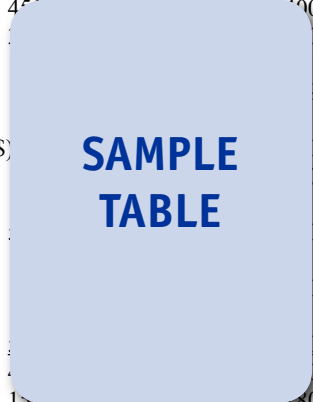


SAMPLE CHART

## Sample Profile, Table & Forecast

**TABLE VII-5**  
**CHINA: ALUMINUM SUPPLY & DEMAND**  
 (thousand metric tons)

Item	2002	2007	2012	2017	2022
Gross Domestic Product (bil 2011\$)	45	100	100	100	100
\$ GDP/capita					
Population (million persons)					
Manufacturing Value Added (bil 2011\$)					
metric tons aluminum/mil \$ MVA					
Aluminum Demand					
net exports					
Aluminum Production					
Primary Aluminum					
Secondary Aluminum	1520	2000	3370	3770	4180



**COMPANY PROFILES**

**Vale SA**  
 Avenida Graça Aranha, Number 26  
 20030-900 Rio de Janeiro  
 Brazil  
 55-21-3814-4000  
<http://www.vale.com>

Revenues: \$100 billion  
 Employment: 100,000

Key Products: Iron ore, nickel, copper, coal, and other materials.

Vale is an international mining firm that mines iron ore, nickel, copper, coal, and other materials. The Company operates in five segments: Bulk Material, Base Metals, Fertilizers, Logistics, and Others.

The Company is active in the world aluminum and bauxite industry through the Base Metals segment, which had revenues of \$7.1 billion and employed 55,070 in 2012. Among the segment's operations are a 40 percent stake in a Paragominas, Brazil bauxite mine and a 40 percent stake in Mineração Rio do Norte SA (MRN), a Brazil based joint venture. The Paragominas mine had a bauxite production capacity of 9.9 million metric tons per year, as of 2012. In 2012, the mine produced 9.2 million metric tons of bauxite.

MRN is a joint venture that is 40 percent held by Vale; 14.8 percent owned by BHP Billiton Limited (Australia); 12 percent held by the Rio Tinto Alcan Incorporated subsidiary (Canada) of Rio Tinto Group (United Kingdom); 10 percent held by the Companhia Brasileira de Alumínio subsidiary of Votorantim Group (Brazil); 8.58 percent owned by Alcoa Alumínio SA (Brazil), a subsidiary of Alcoa Incorporated (US); 4.62 percent held by Alcoa World Alumina Brasil Limitada, a

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**STUDY  
COVERAGE**

This Freedonia industry study, **World Aluminum**, offers historical data (2002, 2007, 2012) as well as forecasts for 2017 and 2022 for aluminum, and demand for bauxite and alumina, in six regions and 20 countries. The study also details key market environment factors, evaluates company market share and profiles 28 competitors in the worldwide aluminum industry.

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**OTHER STUDIES**

**World Housing**

World construction of new housing will reach 61.3 million units in 2018 on 2.9 percent yearly advances. The Asia/Pacific region will own the most new housing units, while the Africa/Mideast housing stock region will grow the fastest. Multifamily housing construction will continue to outpace that of single-family types. This study analyzes the two billion unit world housing industry, with forecasts for 2018 and 2023 for housing stock and new housing units by type, world region, and for 22 countries. The study also considers economic trends, demographics and other market factors.

#3184 ..... July 2014..... \$5800

**World Mining Equipment**

Global demand for mining machinery is forecast to expand 8.6 percent per year through 2017 to \$135 billion. The Asia/Pacific region and Central and South America will be the fastest growing markets. Metals mining equipment will remain the largest product segment and will see the most rapid gains in demand. This study analyzes the \$89.5 billion world mining equipment industry, with forecasts for 2017 and 2022 by market, product, world region, and for 29 countries. The study also evaluates company market share and profiles industry competitors.

#3107 ..... January 2014 ..... \$6300

**World Siding (Cladding)**

The global siding market is projected to rise 5.1 percent annually to 5.7 billion square meters in 2017, valued at \$89 billion. North America will be the fastest growing regional market, while the Asia/Pacific region will remain dominant. Masonry and concrete will remain the most popular siding products. This study analyzes the 4.4 billion square meter world siding industry, with forecasts for 2017 and 2022 by product, market, world region and for 36 countries. The study also evaluates company market share and profiles industry players.

#3101 ..... November 2013 ..... \$6300

**Beverage Containers**

US demand for beverage containers will rise 1.7 percent annually through 2017 to 265 billion units, valued at \$29.1 billion. Unit gains will be driven by ongoing consumer preference for single-serving containers. Plastic containers will remain both the largest and fastest growing segment, driven by PET containers in the noncarbonated RTD beverage market. This study analyzes the 244 billion unit US beverage container industry, with forecasts for 2017 and 2022 by material and market. The study also evaluates company market share and profiles industry participants.

#3076 ..... September 2013..... \$5100

**World Buses**

The world market for buses will grow 5.0 percent annually to 632,000 units in 2016. Type C school buses will lead gains, due largely to rapidly expanding use in China. Transit bus demand will rise at the next fastest rate. The Asia/Pacific region will offer the best growth opportunities, with China and India alone accounting for three-fifths of all new bus demand. This study analyzes the 495,000 unit global bus market, with forecasts for 2016 and 2021 by type, world region and for 25 countries. The study also evaluates company market share and profiles industry participants.

#2933 ..... November 2012 ..... \$6100

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