Delivering a responsible future
Aluminium
Rio Tinto Aluminium
We deliver value through:

- Security of supply
- Commitment to industry leadership
- A responsible partnership
- Leading technical support
- Consistent high-quality aluminium products
Security of supply

Multi-sourced supply

Supply isn’t dependent on a single source
Minimises geopolitical risks

Reliable delivery

Robust, flexible and trusted delivery
Casthouses are strategically located to ensure just-in-time delivery

Integrated supply chain

Integrated from mine to market
Strict quality controls ensure consistent, high quality products
A broad network of smelters

Click a location on the map to see our smelter production. Click the forward button to skip this section.

3.2 million tonnes delivered annually

Rio Tinto
A broad network of smelters

Alma smelter
Alma, Canada
Rio Tinto production*: 465,000 tonnes
Products: aluminium rod, t-foundry, molten metal, high purity, remelt

*Production as of December 31, 2018

3.2 million tonnes delivered annually
A broad network of smelters

**Alouette smelter**  
Sept-Îles, Canada  
Rio Tinto production*: 234,000 tonnes  
Products: aluminium high purity, remelt

*Production as of December 31, 2018

3.2 million tonnes delivered annually
A broad network of smelters

Arvida AP60 smelter
Arvida, Canada
Rio Tinto production*: 52,000 tonnes
Products: aluminium high purity, remelt

*Production as of December 31, 2018

3.2 million tonnes delivered annually
A broad network of smelters

Arvida smelter
Arvida, Canada
Rio Tinto production*: 173,000 tonnes
Products: aluminium billet, molten metal, remelt

*Production as of December 31, 2018

3.2 million tonnes delivered annually
A broad network of smelters

**Beauharnois casting center**
Beauharnois, Canada
Shared production*: 48,000 tonnes
Products: mainly foundry alloys

*Production as of December 31, 2018

3.2 million tonnes delivered annually
A broad network of smelters

Bécancour smelter
Bécancour, Canada
Rio Tinto production*: 34,000 tonnes
Products: aluminium slab, billet, t-foundry, remelt, molten metal

*Production as of December 31, 2018

3.2 million tonnes delivered annually
A broad network of smelters

Bell Bay smelter
Bell Bay, Australia
Rio Tinto production*: 189,000 tonnes
Products: aluminium slab, molten metal, small form and t-foundry, remelt

*Production as of December 31, 2018

3.2 million tonnes delivered annually
A broad network of smelters

**Boyne smelter**
Boyne Island, Australia
Rio Tinto production*: 295,000 tonnes
Products: aluminium billet, EC grade, small form and t-foundry, remelt

*Production as of December 31, 2018

3.2 million tonnes delivered annually
A broad network of smelters

**Dubuc/Small ingot Saguenay casting center**  
Chicoutimi, Canada  
Rio Tinto production*: 50,000 tonnes  
Products: Specialty products: lithium, busbar  
*Production as of December 31, 2018

**3.2 million tonnes delivered annually**
A broad network of smelters

**Grande-Baie smelter**
La Baie, Canada
Rio Tinto production*: 233,000 tonnes
Products: aluminium slab, molten metal, high purity, remelt

*Production as of December 31, 2018

3.2 million tonnes delivered annually
A broad network of smelters

ISAL smelter
Reykjavik, Iceland
Rio Tinto production*: 212,000 tonnes
Products: aluminium remelt, billet

*Production as of December 31, 2018

3.2 million tonnes delivered annually
A broad network of smelters

Kitimat smelter
Kitimat, Canada
Rio Tinto production*: 436,000 tonnes
Products: aluminium slab, remelt, high purity

*Production as of December 31, 2018

3.2 million tonnes delivered annually
A broad network of smelters

Laterrière smelter
Arvida, Canada
Rio Tinto production*: 257,000 tonnes
Products: aluminium slab, remelt, molten metal

*Production as of December 31, 2018

3.2 million tonnes delivered annually
A broad network of smelters

**Sohar smelter**
Sohar, Oman
Rio Tinto production*: 76,000 tonnes
Products: high purity, remelt

*Production as of December 31, 2018

3.2 million tonnes delivered annually
A broad network of smelters

Tiwai Point smelter
Invercargill, New Zealand
Rio Tinto production*: 270,000 tonnes
Products: aluminium billet, slab, small form foundry, high purity, remelt

*Production as of December 31, 2018

3.2 million tonnes delivered annually
A broad network of smelters

Tomago smelter
Tomago, Australia
Rio Tinto production*: 305,000 tonnes
Products: aluminium billet, slab, remelt

*Production as of December 31, 2018

3.2 million tonnes
delivered annually
Integrated supply chain
Reliable from mine to market

50 million tonnes of bauxite
from 4 mines

8 million tonnes of alumina
from 4 refineries

8 power stations
Sustainable and secure power

3.2 million tonnes of aluminium produced
at 18 casthouses

550 customers
in more than 50 countries
A responsible partnership

Recycling is not enough...That’s why we created RenewAl™

RenewAl™ is a comprehensive package of a certified CO₂ content of 4tCO₂/tAL or below and customised services.

Find out how RenewAl™ offers a cleaner start to your product lifecycle.

Certification

We are a co-founder of the Aluminium Stewardship Initiative (ASI). The only aluminium in the world independently certified to be produced and sold, in a way that treats people fairly, manages waste properly and reduces impacts on the environment.

Partnership

Joining forces with Alcoa, supported by Apple and the governments of Canada and Quebec, to develop the world’s first carbon-free smelting process.

RioTinto
RenewAl™ is a comprehensive package that includes:

**Certified CO₂ content 4tCO₂/tAl or below**

Tonnes of CO₂ emitted per tonne of aluminium produced (Scope 1&2)

- **Certification** Third party certified CO₂ emissions (Scope 1&2)
- **Technical expertise** Assistance in leveraging low CO₂ aluminium
- **Traceability** Product tracked from mine to metal
- **CO₂ reduction strategies** Support to optimise your low CO₂ sources
- **Life cycle analysis** Contribution to specific calculation on lifecycle
- **Co-branding** Unique partnerships with RenewAl™

3 times lower CO₂ footprint with RenewAl™

Click here to find out why RenewAl™ is a cleaner start to the product lifecycle.
Recycling is not enough, RenewAl™ is a cleaner start to the product lifecycle

<table>
<thead>
<tr>
<th>Primary Base</th>
<th>+</th>
<th>Recycle 0.6*</th>
<th>+</th>
<th>Recycle 0.6*</th>
<th>=</th>
<th>Final CO₂ footprint</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>+</td>
<td>0.6*</td>
<td>+</td>
<td>0.6*</td>
<td>=</td>
<td>5.2t CO₂/tAl</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Industry average</th>
<th>+</th>
<th>Recycle 0.6*</th>
<th>+</th>
<th>Recycle 0.6*</th>
<th>=</th>
<th>12.7t CO₂/tAl</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.5</td>
<td>+</td>
<td>0.6*</td>
<td>+</td>
<td>0.6*</td>
<td>=</td>
<td>12.7t CO₂/tAl</td>
</tr>
</tbody>
</table>

*At every recycle process the CO₂ footprint is 0.6, calculated from 0.4 transformation +0.2 transportation

Aluminium made with recycled material takes only 5% of the energy to produce, however the primary base impacts in CO₂ footprint. For example, after recycling an automobile twice, the CO₂/tAl is 5.2, compared to the industry average of 12.7t CO₂/tAl.

That’s three times lower with RenewAl™

4tCO₂/tAl we start with 4tCO₂/tAl primary base compared to the industry average of 11.5t CO₂/tAl
### Rolling slab
Alloys 1xxx, 3xxx, 5xxx, 6xxx, 7xxx, 8xxx series

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Width</th>
<th>Lengths</th>
</tr>
</thead>
<tbody>
<tr>
<td>300mm-762mm (12in-30in)</td>
<td>860mm-2,514mm (34in-99in)</td>
<td>Up to 9,600mm (378in). More than 100 rolling slab formats available. Customisation possible upon request.</td>
</tr>
</tbody>
</table>

### Extrusion billet
Alloys 1xxx, 3xxx, 6xxx and some 7xxx series

<table>
<thead>
<tr>
<th>Diameters available</th>
<th>Lengths</th>
</tr>
</thead>
<tbody>
<tr>
<td>81-355 mm (3.2in-14in)</td>
<td>305-8,000mm (12in-315in)</td>
</tr>
</tbody>
</table>

### Foundry (ingot and T-bar)

<table>
<thead>
<tr>
<th>Small form ingot weight</th>
<th>T-bar weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-24 kg (18-53 lbs)</td>
<td>327-907 kg (720-2,000 lbs)</td>
</tr>
</tbody>
</table>

### Rod
Alloys 1080, 1120, 1188, 1350, 1370, 4043, 4047, 5005, 6101, 6201, 8030, 8176, Al-Zr

<table>
<thead>
<tr>
<th>Diameters available</th>
<th>Outer diameter</th>
<th>Coil weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.53mm, 12.0mm, 12.72mm</td>
<td>in</td>
<td>mm</td>
</tr>
<tr>
<td>Width 915mm</td>
<td>60.4</td>
<td>1,533</td>
</tr>
<tr>
<td>Inner diameter 775mm</td>
<td>71.4</td>
<td>1,815</td>
</tr>
<tr>
<td>73.8</td>
<td>1,874</td>
<td>8,818</td>
</tr>
</tbody>
</table>

### High purity ingot
Grades from 99.90% to 99.98% purities

<table>
<thead>
<tr>
<th>T-ingot weight</th>
<th>Small form ingot weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>625-750kg</td>
<td>23.4kg</td>
</tr>
</tbody>
</table>

### Remelt ingot

<table>
<thead>
<tr>
<th>T-ingot weight</th>
<th>Small form ingot weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>625-750kg</td>
<td>12-24kg</td>
</tr>
<tr>
<td>Sow ingot weight</td>
<td>600-750kg</td>
</tr>
</tbody>
</table>

### Specialty products
Busbar, Metal Matrix Composites

Our busbars, anode beams and anode studs enhance current efficiency and cell stability, helping drive down energy consumption.

DURALCAN®, BORALCAN®
| **Rolling slab**  
Alloys 1xxx, 3xxx, 5xxx, 6xxx, 7xxx, 8xxx series | **Thickness**  
300mm-762mm (12in-30in)  
**Width**  
860mm-2,514mm (34in-99in) | **Lengths**  
Up to 9,600mm (378in). More than 100 rolling slab formats available. Customisation possible upon request. |
|---|---|---|
| **Extrusion billet**  
Alloys 1xxx, 3xxx, 6xxx and some 7xxx series | **Diameters available**  
81-355 mm (3.2in-14in) | **Lengths**  
305-8,000 mm (12in-315in) |
| **Foundry (ingot and T-bar)**  
8-24 kg (18-53 lbs)  
**T-bar weight**  
327-907 kg (720-2,000lbs) | |
| **Rod**  
Alloys 1080,1120, 1188, 1350, 1370, 4043, 4047, 5005, 6101, 6201, 8030, 8176, Al-Zr | **Diameters available**  
9.5 mm, 12.0mm, 12.7 mm  
**Coil dimensions**  
Width 915mm  
Inner diameter 775mm | **Outer diameter**  
| in  
60.4  
71.4  
73.8 | mm  
1,533  
1,815  
1,874 | lbs  
5,292  
8,157  
8,818 | kg  
2,400  
3,700  
4,000 |
| **High purity ingot**  
Grades from 99.90% to 99.98% purities | **T-ingot weight**  
625 - 750kg | **Small form ingot weight**  
23.4kg |
| **Remelt ingot** | **T-ingot weight**  
625-750kg  
**Sow ingot weight**  
600-750kg | **Small form ingot weight**  
12-24kg |
| **Specialty products**  
Busbar, Metal Matrix Composites | **Our busbars, anode beams and anode studs enhance current efficiency and cell stability, helping drive down energy consumption.**  
**DURALCAN®, BORALCAN™** | |
Our experts develop solutions to meet your needs

- Downstream expertise
- Alloy development
- Technical training and seminar
- Process improvement
- Cutting-edge research

Click a section to learn more
Our experts develop solutions to meet your needs

Downstream expertise
We pioneer innovative technologies and products for industries including the automotive and building and construction sectors.
Find out more about our automotive expertise.

Alloy development

Technical training and seminar

Process improvement

Cutting-edge research

Click a section to learn more
Our experts develop solutions to meet your needs

**Downstream expertise**

We've tailored dozens of new alloys that give you an edge in a growing and dynamic market.
Contact us to talk about finding the alloy for your needs.

**See business case**

**Alloy development**

**Technical training and seminar**

**Process improvement**

**Cutting-edge research**

Click a section to learn more
Our experts develop solutions to meet your needs

**Downstream expertise**

**Alloy development**

**Technical training and seminar**
We offer training and can also assess your processes and recommend solutions to enhance your productivity.

**Need training or technical support?**
Please contact Jerome Fourmann
M: +1 440 520 4975
jerome.fourmann@riotinto.com

**Process improvement**

**Cutting-edge research**
<table>
<thead>
<tr>
<th>Downstream expertise</th>
<th>Alloy development</th>
<th>Technical training and seminar</th>
<th>Process improvement</th>
<th>Cutting-edge research</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="#" alt="Image" /></td>
<td><img src="#" alt="Image" /></td>
<td><img src="#" alt="Image" /></td>
<td>We continuously improve our customer products and processes. It’s one of the ways we boost your productivity and drive down your costs. <strong>See example</strong></td>
<td><img src="#" alt="Image" /></td>
</tr>
</tbody>
</table>

Our experts develop solutions to meet your needs.
Our experts develop solutions to meet your needs

Downstream expertise

Alloy development

Technical training and seminar

Process improvement

Cutting-edge research
We invest in research to develop new technologies and specialised alloys
Alloy development

Our cutting edge alloys

Automotive
Automotive customers use our innovative Aural™ foundry alloy in applications such as shock towers, node and battery boxes.

We’ve also developed a heat-treatment-free alloy for structural castings.

Automotive cast wheel can now benefit from a recent alloy development allowing a 7-10% weight reduction.

Heating, ventilation and air-conditioning (HVAC)

Our 31104 long life™ extrusion alloy is a corrosion resistance industry benchmark for automotive and for HVAC transfer applications.

Building and construction

We’ve developed the Superflow™ alloy series for the building and construction sector. These versatile alloys combine high extrudability, high finish response and a wide range of properties suitable to many requirements.

BMW X5 Shock Tower in Aural™ 2

Contact your sales manager to learn more.
Process improvement

The work that the team has done over the past years is truly amazing! Thanks again and looking forward to continuing a great partnership.

Henning Hahn,
Director of supply chain, Novelis

Rio Tinto wins Novelis award

We worked with Novelis to boost their on-time-in-full orders by 40% within a year. This enabled them to improve their on-time delivery and gain new customers.
Best in class technology and industry leading expertise

AP60 redefined the industry

- The world’s most advanced smelter technology
- Step change in efficiency to produce highest quality alloys
- Lower emissions

Over 95% of our energy is secured for the long term
You can count on us
We’re investing in our operations to ensure we can provide quality product over the long term

**Foundry small form**
From 2014 to 2022, we’ll increase our foundry small form capacity by 150%. This will mean we can offer a multi-sourced supply delivered anytime, anywhere.

**Cast cut project**
Our new cast cut product will be available in 2019 to meet your business needs.

**Billet**
We’re continuously growing our production capacity to meet our customers’ needs. Billet is one product we’re investing in to meet growing demand.

**Slab**
We want our customers to benefit from an endless supply of products. That’s why we plan to grow our slab capacity, so your business can grow too.