



LEED MATERIALS INFORMATION - 2016



L.E.E.D., Sustainability and the Environment

LEED (Leadership in Energy and Environmental Design) is a green building certification program that recognizes best-in-class building strategies and practices while providing guidelines for developing high-performance, sustainable buildings. LEED is helping both existing and new construction buildings around the world save energy, water, resources, and money, while having a positive impact on the health and well-being of the occupants. Matalco fully recognizes and supports the benefits of these initiatives, and as a result of our strong scrap supply chain and local sourcing strategy, Matalco is well positioned to maximize the materials requirements as they pertain to the globally recognized LEED program.

Matalco Inc.'s Brampton, Ontario State-of-the-Art Casting Plant Facts

- Matalco is Canada's largest producer of remelt billet with an annual capacity in excess of 250 million net pounds
- Matalco produces high-grade aluminum billet for the extrusion and forging industries using recycled aluminum and utilizing world-class remelt technology
- Matalco's business model maximizes the usage of scrap versus prime aluminum, with a typical scrap to prime aluminum percent ratio of 75:25%
- Matalco purchases most of all its scrap in the form of obsolete or post-consumer materials consisting of truck wheels, car wheels, extrusions, coils, plate, and sheet
- Matalco's overall post-consumer scrap utilization is between 5% - 20%

All recycled aluminum from our toll customers, and our scrap and primary aluminum purchases, are consumed as a large "pool" of metal units. Matalco's metal blending system chooses the most cost effective units for our "production heat" that will satisfy the quality demands and chemical specifications for the particular alloy that we are making.

You can be assured that all of the metal units are consumed in an economically and environmentally suitable manner. As materials on-hand may vary from day to day, so will the production requirements. It is virtually impossible to guarantee a consistent amount of any particular raw material used for a specific alloy. This is why Matalco provides a generic "global" usage of recycled aluminum.

In 2016, Matalco utilized a blend of 72% scrap and 28% primary aluminum; material mix percentages may vary from batch to batch. Matalco’s standard blending formula calls for a minimum of 5% post-consumer metal in every blend; for our 6063 type alloy grades, the final percentage is between 5% and 15%. Other aluminum alloys, such as 6005A and 6061, often have a higher percentage of post-consumer scrap which can contain in excess of 30% post-consumer aluminum scrap.

Typical scrap utilization rates for 6063 LEED material is a minimum of 10% post-consumer and 40% pre-consumer (also referred to as post-industrial) aluminum scrap.

Matalco has the ability to provide material utilization for each cast, and we permanently store the records on our computer network for future reference.

2016 Matalco – Brampton, ON Raw Material Usage (%)

Post-Consumer - dealer scrap bare and painted	14.09%
P1020 (Primary) - primary aluminum ingots	27.87%
Pre-Consumer - customer extrusion press scrap	55.21%
Industrial / other - industrial and off-grade sow	1.50%
Internal – scrap generated in-house	1.00%
Hardeners – alloying materials	0.33%

Total:	100%
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- The above table represents Matalco’s Brampton, ON plant metal usage split as a whole for 2016
- Material percent usage will vary from cast to cast, and is dependent on the market availability of scrap

Matalco is solidly behind any “Green” initiatives that we can embrace. We capture and recycle excess furnace heat, reduce our reliance on other metallic hardeners by maximizing scrap blending, recycle our water, and have controls in place to ensure air emissions are maintained below governmental reporting thresholds. Matalco operates a modern fleet of custom designed light weight trailers to maximize efficiency and reduce transportation costs through fuel savings. Our sister company, Triple M Metal LP – Canada’s largest scrap company – assures Matalco the highest degree possible of post-consumer scrap content in our metal.

Additional Information:

Electromagnetic Stirring

Matalco utilizes an electromagnetic stirring process in our plant. The primary benefit of electromagnetic stirring, from a metallurgical point of view, is that the continuous stirring of the molten metal in the furnace results in a more consistent blend of elements and therefore a more homogeneous batch.

There are also great environmental benefits associated with this process. For example, when the furnace doors are opened to manually stir molten aluminum, heat escapes and oxides can form in the molten metal. Electromagnetic stirring minimizes the need to open the furnace doors, reducing the heat loss and decreasing the melting time, thereby contributing to a savings in thermal units. Less dross and salt cake, a by-product of dross, is generated resulting in greater metal units being retained and less waste sent to landfills.

Scrap Blending

Matalco's blending strategy attempts to utilize the alloying ingredients (hardeners) found in scrap metal. Approximately 60% of our alloying elements are contained in the scrap aluminum. Applying proper blending practices results in a reduction of approximately 1 million lbs of hardeners originating from overseas sources.

Local Supply

At least 80% of the raw materials consumed in our production process are supplied from within a 500 mile (800 kilometer) radius of our plant. This includes all aluminum scrap generated from our customers' processes and most of our scrap and primary aluminum purchases. For competitive and strategic reasons, Matalco does not divulge the names of the sources of our raw materials. By sourcing locally, it helps to minimize the environmental impact in the form of CO₂ emissions.

Aluminum Recycling – Helping to save our Planet

- Recycling aluminum into new products saves 95% of the energy required to produce virgin aluminum; the recycling of one aluminum can saves enough energy to run a TV for 3 hours, or a 100 watt light bulb for 4 hours
- 4 lbs of bauxite are saved for every pound of aluminum recycled
- Aluminum is infinitely recyclable and does not lose its properties no matter how many times it is recycled
- Of the more than 1 billion tons of aluminum ever produced, roughly 75% of the lightweight metal is still in use today thanks to recycling
- Recycled aluminum requires much less energy than producing primary aluminum. As a result, the recycling process generates 95% less emissions, such as greenhouse gases, eliminating at least 90 million tons of carbon dioxide from being released into the atmosphere every year, equivalent to the annual emissions from 15 million cars.
- Recycling aluminum helps conserve and preserve the environment
- Over the long term, even larger national savings are made when the reduction in the capital costs associated with landfills; mines and international shipping of raw aluminum is considered

If you have any questions, or require any additional information, please do not hesitate to contact Matalco directly.

Please feel free to distribute this document to your customers.

Regards,

Bob

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