



By  Hydro

SUSTAINABLE SOLUTIONS
Aluminum in the Circular Economy

Formação & Divulgação

Hydro Extrusions

José Eduardo - Versão de Janeiro, 2024

***“WE CREATE WINDOWS, BY DESTROYING
WINDOWS”***



What is the production footprint in CO₂ of a standard gasoline vehicle?



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8500 kg CO_{2eq}

Source: fka GmbH, research study 2019

What is the construction footprint in CO₂ per surface m² of offices building?



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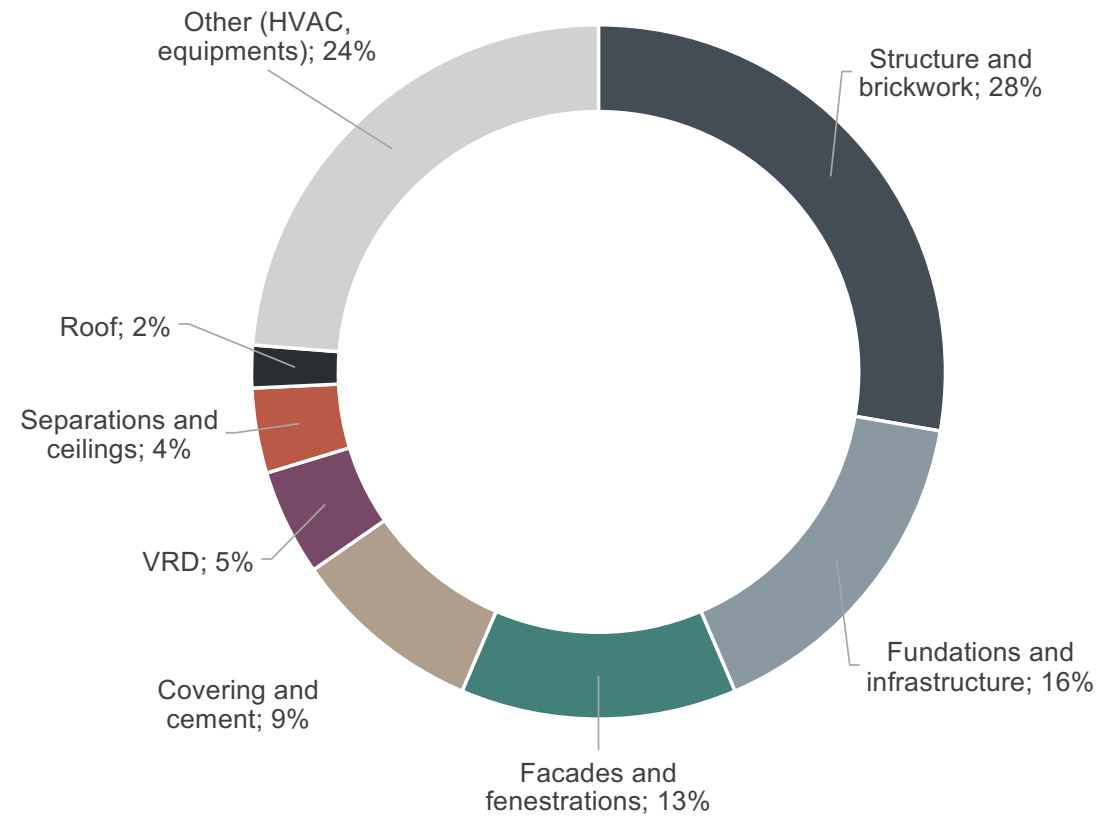


500-1000kg CO₂eq/m²

What is the construction footprint in CO₂ per surface m² of offices building?



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A large, chaotic pile of aluminum scrap metal, consisting of numerous thin, elongated pieces of varying lengths and colors (mostly silver, with some blue, red, and green). The scrap is piled high, filling most of the frame. In the background, a cloudy sky is visible. A white text box is overlaid on the center of the image.

Aluminum scrap has a value, with an identity

Educating the market: Different types of profiles scrap

Recycling of post-consumed scrap will give the full CO₂e benefit



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Extrusion, industrial & Fabrication Scrap

Has **never**
become a product



Post-consumer scrap

Goes into
Hydro CIRCAL

As ligas com baixas emissões da Hydro nos produtos TECHNAL



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Hydro CIRCAL

Redefiniu novos padrões em Reciclagem





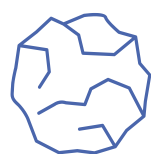
The CIRCAL aluminum in the Circular Economy



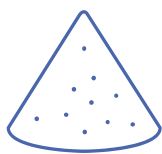
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UPCYCLING:

Makes a material
PERMANENT, it can be
recycled over and over
again **without losing
quality**



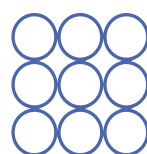
Bauxite



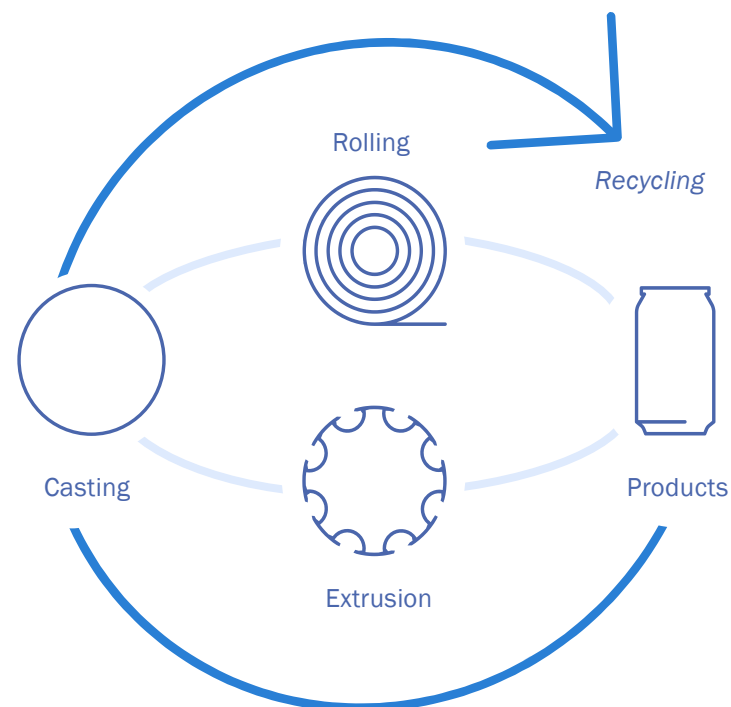
Alumina



Energy



Primary



Infinitely recyclable – a high recycling rate

One of the world's largest energy reserves, increasingly utilized through urban mining and recycling



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What's inside Hydro CIRCAL?

primary aluminium
made from
renewable energy

A bit more **post-
consumer scrap**

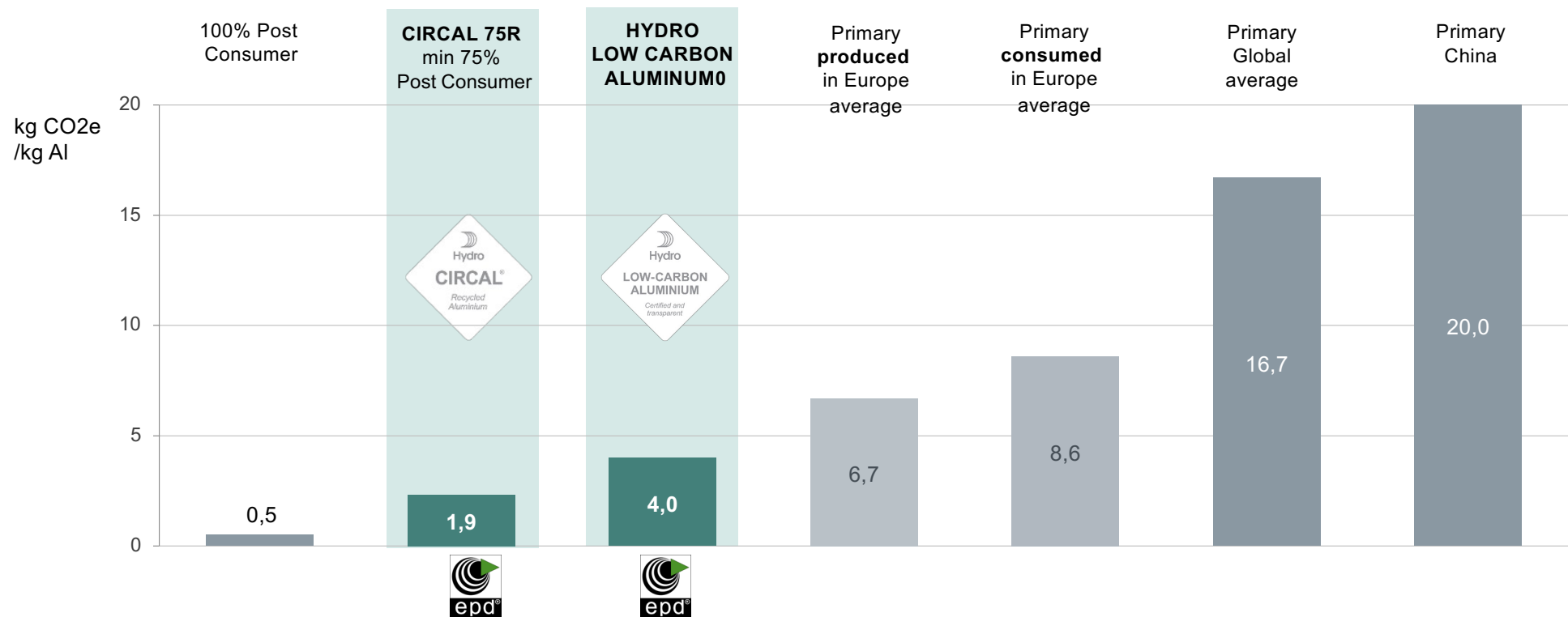
min. 75%

minimum 75% **Post-consumer scrap**

sometimes
**pre-consumer
scrap**



Aluminium CO₂ footprints by origins



Source: IAI/EAA/Hydro

Hydro's low-emission CIRCAL alloy in TECHNAL products



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All systems in the Technal brand portfolio use CIRCAL alloy



Environmental Product Declaration (EPD)



ENVIRONMENTAL PRODUCT
DECLARATION

according to ISO 14025 and EN 15804

Declaration owner
Publisher
Programme holder
Declaration number
Date of issue
Valid until

Hydro Building Systems Germany GmbH
Institut Bauen und Umwelt e.V. (IBU)
Institut Bauen und Umwelt e.V. (IBU)
EPD-K/123 03/02/2022 16:38:24
03/02/2022
03/02/2027

K/123; 1:
FY EVO - Janela Batente 1 Folha INT. (Aparente)

TECHNAL PORTUGAL

www.ibu-epd.com / <https://epd-online.com>


Institut Bauen
und Umwelt e.V.


By 




The Norwegian EPD Foundation

ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025, ISO 21930 and EN 15804

Owner of the declaration:
Program operator:
Publisher:
Declaration number:
Registration number:
ECO Platform reference number:
Issue date:
Valid to:

Hydro Aluminium AS
The Norwegian EPD Foundation
The Norwegian EPD Foundation
NEPD-1541-768-EN
NEPD-1541-768-EN
-
05.05.2019
05.05.2024

Hydro 75R Aluminium Extrusion Ingot



Hydro Aluminium AS

www.epd-norge.no



**Recycled materials should be
the building blocks of the future.**

**Europe recycles 11 million tons of aluminum per year!
The savings in greenhouse gas emissions are equivalent to the
emissions that a long-haul jetliner would release in many
circumnavigation trips around the Earth.**

Do you know how many?...



46000!

Muito obrigado

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<https://youtu.be/SFNh7ehfmGk>