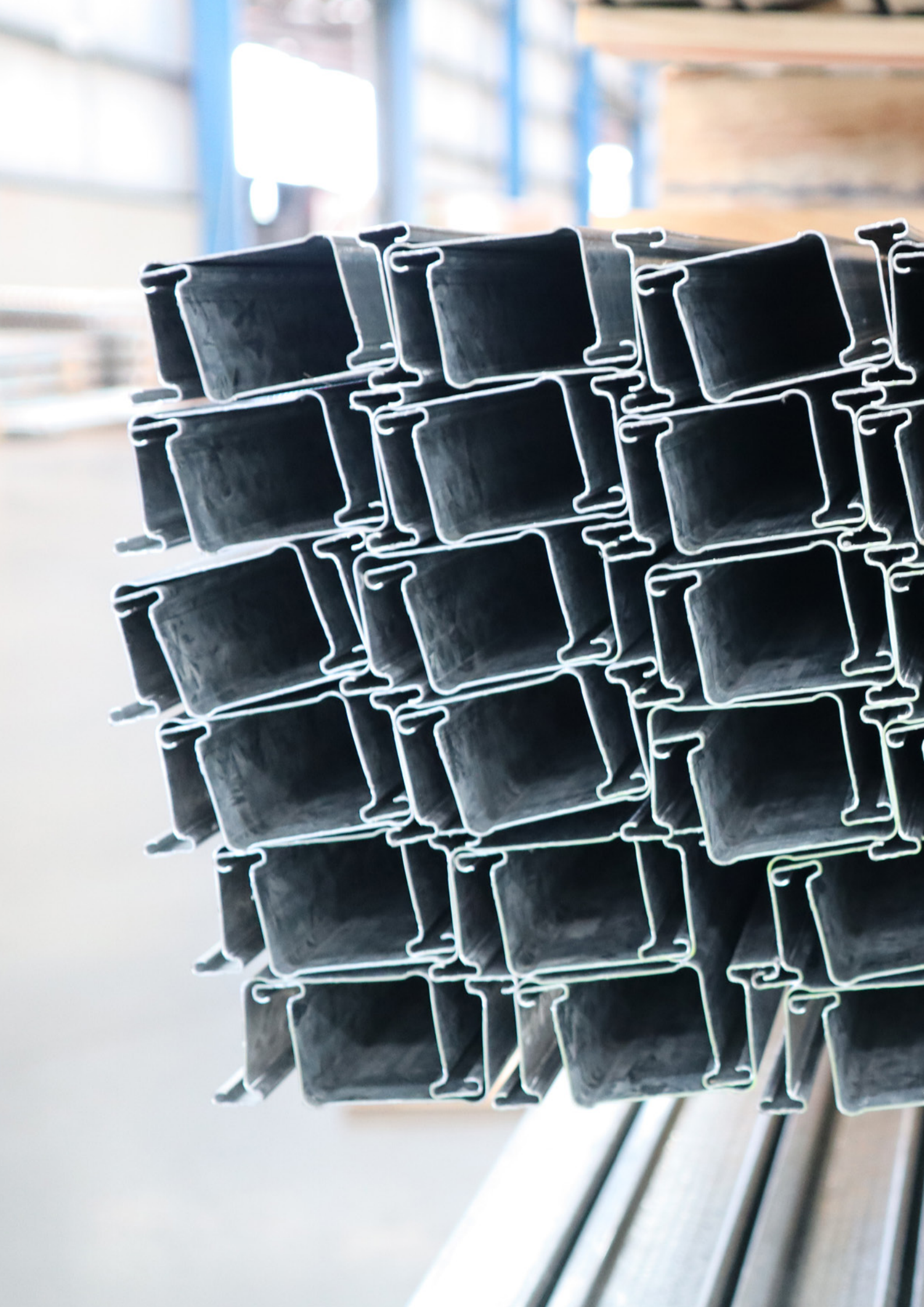
EPDs in Construction

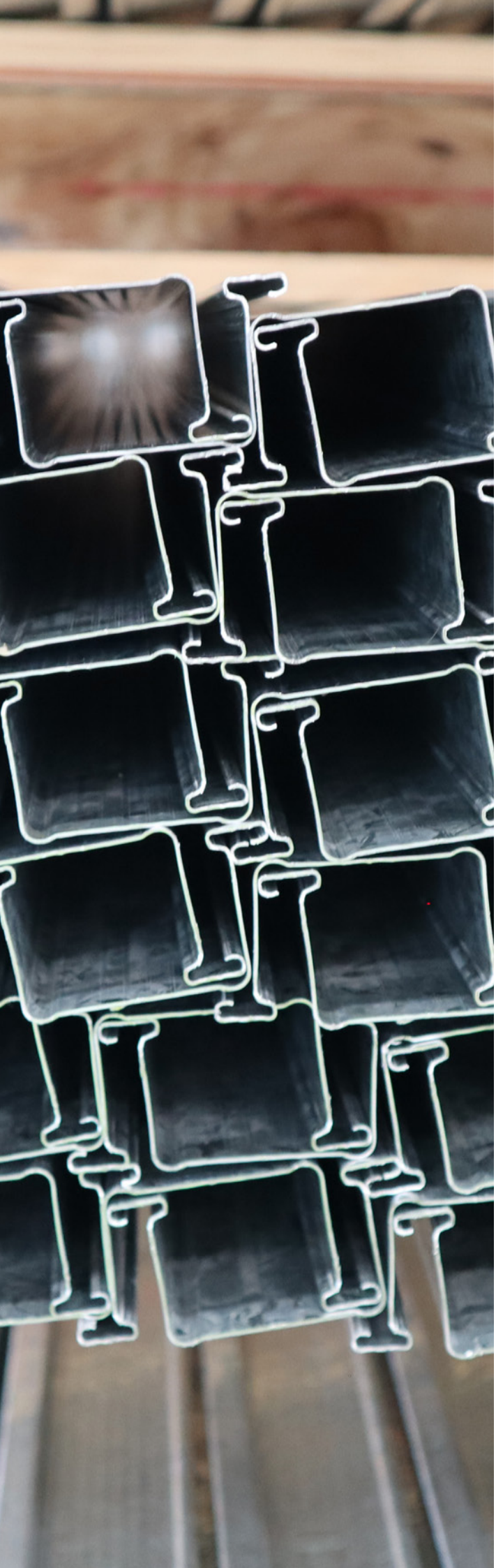
Building Transparency, Trust, and Sustainability

RONDO®

GYPROCK®

CSR





INTRODUCTION

The transition to a sustainable built environment requires credible, transparent environmental data. Environmental Product Declarations (EPDs) have become an essential tool in this process, offering standardised, third-party-verified insights into the environmental impact of building materials across key life cycle stages. As sustainability standards continue to evolve, EPDs are increasingly being requested in project specifications - often before materials are even selected - ensuring that every decision aligns with environmental goals from the outset.

By providing clear data on energy use, water consumption, resource depletion, and emissions, EPDs empower architects, designers, and builders to compare the environmental performance of building products and make informed choices that support sustainability targets. Beyond environmental impact, they may also include information on product performance, certifications, and environmental management practices, reinforcing their value as a decision-making tool.

Transparency in sustainable design not only builds trust but also strengthens industry credibility by demonstrating a commitment to ethical, responsible practices. EPDs facilitate open communication between stakeholders, fostering collaboration and aligning sustainability priorities across the supply chain. As the industry moves toward more data-driven partnerships, leveraging EPDs allows for optimised material selection and more sustainable design outcomes, ultimately contributing to a lower-carbon, more resilient built environment.

This paper will explore the growing role of EPDs in the design and construction industry, examining how they are shaping material selection, fostering sustainable partnerships, and driving compliance with evolving environmental standards.

UNDERSTANDING EPDS

EPDs are standardised, third-party-verified reports that provide transparent data on a product's environmental impact across its life cycle. Developed under the **ISO 14025** framework (Type III Environmental Declarations), EPDs allow architects, designers, and construction professionals to assess and compare materials based on credible, quantifiable sustainability metrics.

The foundation of every EPD is a Life Cycle Assessment (LCA), conducted according to **ISO 14040** and **ISO 14044** standards. The LCA evaluates key environmental factors, including raw material extraction, manufacturing processes, transportation, product use, and disposal or recycling. An EPD must follow a Product Category Rule (PCR)—a set of industry-specific guidelines that define how the LCA should be performed. For construction materials, the EN 15804 standard (Sustainability of Construction Works) provides a common methodology for assessing building products. Once the LCA is completed, the data is independently verified before being compiled into the final EPD document.

The EPD creation process follows a structured pathway, starting with selecting the relevant PCR, conducting a rigorous LCA, and assembling the findings into a formal report. After thorough third-party verification, the EPD is registered with an official program operator, such as EPD Australasia, ensuring it is publicly available for architects, designers, and specifiers.

IMPORTANCE OF EPDS IN SUSTAINABLE BUILDING

As the largest emitter of greenhouse gases—accounting for 37% of global emissions, according to the UN Environment Programme—the construction sector must take decisive steps to reduce its environmental impact.[1] Architects, specifiers, contractors, and developers play a pivotal role in this transformation, as the material and product choices they make directly impact the environmental footprint of the built environment.

EPDs ensure that sustainability is not just an aspiration but a measurable and actionable factor in material selection. EPDs include key metrics such as global warming potential (GWP), energy and water consumption, resource depletion, emissions, and waste generation. EPDs also detail manufacturing processes, transportation impacts, and end-of-life scenarios. By providing data on environmental factors that can be compared across a product category, EPDs support informed decision-making, helping professionals select products that align with sustainability goals and regulatory requirements.

The growing adoption of EPDs highlights their increasing importance in sustainable building. EPD Australasia has reported a steady rise in the number of published EPDs, reflecting a shift in the industry towards greater transparency and accountability.[2] With more manufacturers in Australia and New Zealand embracing EPDs, architects and specifiers have access to an expanding pool of verified data to guide their material choices.

EPDS AS MARKET DIFFERENTIATORS

EPDs are becoming essential market differentiators in the design and construction industry as sustainability and transparency gain increasing importance. In Australia alone, 431 new EPDs were released between early August and early December 2024.[3] This highlights the increasing recognition of EPDs as a reliable source of standardised, third-party verified data on product environmental impacts.

As demand for greater transparency in sustainable design grows, EPDs are becoming an integral part of industry best practices. Many building standards and certification frameworks are now incorporating EPD-backed building products and materials as a requirement. For example, the Green Building Council of Australia has incorporated the use of EPDs in its Green Star rating tools. This shift is driving manufacturers to adopt EPDs not just as a compliance measure but as a key factor in product development and marketing strategies.

Beyond regulatory benefits, EPDs offer a competitive advantage in the marketplace by meeting client expectations for environmentally responsible products. As the demand for materials that support ESG (Environmental, Social, and Governance) principles continues to grow among developers and architects, manufacturers offering EPD-backed products play a key role in meeting these evolving industry standards. This trend reflects a broader industry shift toward sustainability as a core value, where transparency and accountability are no longer optional but expected.

By providing data on environmental factors that can be compared across a product category, EPDs support informed decision-making, helping professionals select products that align with sustainability goals and regulatory requirements.

HOW EPDS BUILD SUSTAINABLE PARTNERSHIPS

Fostering transparency and trust

By sharing environmental information with design and construction professionals, EPDs enable manufacturers to demonstrate a strong commitment to transparency and environmental responsibility. This openness builds trust among stakeholders who prioritise eco-friendly practices, fostering long-term relationships based on shared sustainability goals. When all parties have access to reliable environmental data, collaboration becomes more seamless, strengthening partnerships that drive responsible design and construction.

Aligning sustainability goals

Sustainability certifications such as LEED, Green Star, and BREEAM are increasingly important in the design and construction industry, and EPDs play a critical role in achieving these credentials. By prioritising EPD-backed materials, project teams ensure that material selection aligns with sustainability standards and project objectives.

EPDs also enhance collaboration by establishing a shared language for sustainability. Since these declarations quantify environmental impacts, all stakeholders, from architects to contractors, can make informed choices based on consistent, comparable data.

Enabling life cycle optimisation

EPDs support data-driven collaboration by providing stakeholders with the insights needed to assess the full life cycle impact of building materials. This allows architects, specifiers, and manufacturers to work together to optimise material selection, reduce waste, and lower emissions throughout a building's lifespan. By making informed choices early in the design process, teams can improve overall sustainability outcomes while reinforcing relationships with partners who share a long-term vision for environmental stewardship.

Encouraging a culture of innovation

EPDs encourage innovation in construction by providing transparent, data-driven insights that push manufacturers to develop lower-impact, high-performance materials. This drives continuous improvement in product design, resource efficiency, and sustainable building practices, enabling project teams to adopt cutting-edge solutions that reduce environmental impact while maintaining quality and durability.

When all parties have access to reliable environmental data, collaboration becomes more seamless, strengthening partnerships that drive responsible design and construction.

DRIVING SUSTAINABLE CONSTRUCTION WITH CSR GYPROCK AND RONDO'S EPDS

The integration of EPDs into design and procurement drives innovation by making sustainability a measurable, actionable goal. By providing transparent data, **EPDs bridge the gap between design intent and practical implementation**, ensuring that projects not only meet but often exceed sustainability targets.

As the construction industry prioritises sustainability and environmental accountability, CSR Gyprock and Rondo stand at the forefront with their EPDs. CSR Gyprock's EPDs cover a range of high-performance plasterboard solutions, ensuring projects meet fire-resistance, acoustic, and thermal insulation requirements while reducing embodied carbon. Rondo's EPDs focus on steel framing systems, including ceiling and wall framing solutions. Offering this level of detailed sustainability insight, both companies are providing professionals with the tools they need to make responsible and informed material choices.

For construction projects targeting Green Star, LEED, or BREEAM certification, CSR Gyprock's and Rondo's EPDs play a vital role. These declarations allow for direct, data-driven comparisons between products, ensuring that sustainability is integrated into the decision-making process at every stage. By choosing EPD-backed materials, construction professionals can confidently demonstrate alignment with evolving industry standards and corporate ESG commitments.

CSR Gyprock and Rondo's commitment to EPDs strengthens the entire construction supply chain. By integrating recyclable steel framing and sustainable plasterboard solutions, these materials ensure durability, design flexibility, and long-term environmental benefits. Their investment in sustainable innovation reflects an industry-wide shift toward low-impact, future-proof buildings. As the demand for resilient, sustainable construction materials continues to grow, CSR Gyprock and Rondo's EPD-backed solutions will remain essential for shaping a more sustainable, high-performing built environment.

To view CSR Gyprock and Rondo's EPDs, follow the below link to the EPD Australasia website:

- https://epd-australasia.com/epd/gypsum-plasterboard-products
- https://epd-australasia.com/epd/ceiling-wall-framing-and-finishing-products-from-rondo

REFERENCES

1 UN Environment Programme. “Building Materials And The Climate: Constructing A New Future.” https://www.unep.org/resources/report/building-materials-and-climate-constructing-new-future (accessed 16 February 2025).

2 EPD Australasia. “Continued Growth in EPD Publications.” EPD Australasia. https://epd-australasia.com/2024/12/continued-growth-in-epd-publications (accessed 16 February 2025).

3 Ibid.

All information provided correct as of March 2025

RONDO® GYPROCK® CSR