Environmental Product Declaration

In accordance with ISO 14025:2006 and ISO 21930 for:

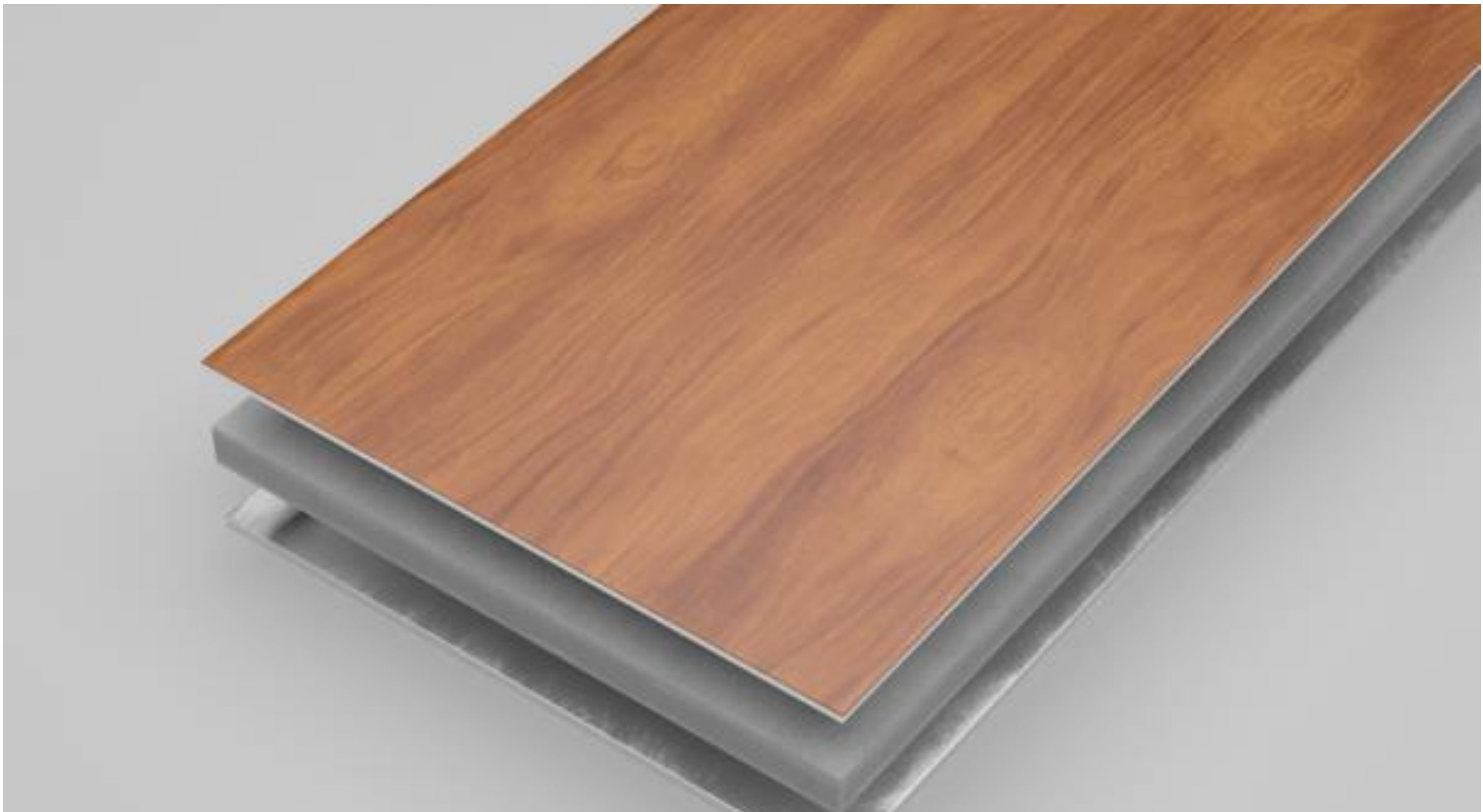
Reynobond® Composite Material FR 4mm

from

Arconic Architectural Products

Licensee:	The North American EPD® System
Program:	The International EPD® System, www.environdec.com
Program operator:	EPD International AB
EPD registration number:	EPD-IES-0023112
Publication date:	2025-05-23
Valid until:	2030-05-23

An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com.



General information

Program information.

Program:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
E-mail:	info@environdec.com

Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
UL Part A: Life Cycle Assessment Calculation Rules and Report Requirements, UL 10010, V3.2
UL Part B: Insulated Metal Panels, Metal Composite Panels, and Metal Cladding: Roof and Wall Panels, UL 10010-5
PCR review was conducted by: Thomas Gloria, PhD (chair), Industrial Ecology Consultants, t.gloria@industrial-ecology.com Lindita Bushi, PhD, Athena Sustainable Materials Institute, lindita.bushi@athenasmi.org Bob Zabcik, P.E., LEED AP BD+C, NCI Building Systems, BobZ@ncigroup.com
Life Cycle Assessment (LCA)
LCA accountability: Leslie Louie and Gaëlle Guillaume WAP Sustainability Ltd 103 Powell Ct., Suite 200, Brentwood, TN 37027 info@WAPSustainability.com
Third-party verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: ☒ EPD verification by individual verifier Third-party verifier: *Freddy Navarro, LCACHECK S.A.S. de C.V.* Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier: ☐ Yes ☒ No

The EPD owner has the sole ownership, liability, and responsibility for the EPD. Environmental declarations from different programs based upon differing PCRs may not be comparable. When comparing EPDs created using this PCR, variations and deviations are possible. Example of variations: Different LCA software and background LCI datasets may lead to different results for upstream or downstream of the life cycle stages declared.

EPDs within the same product category but registered in different EPD programs, or not compliant with ISO 21930, may not be comparable. For two EPDs to be comparable, they must be based on the same PCR (including the same version number) or be based on fully-aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have equivalent system boundaries and descriptions of data; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see ISO 21930 and ISO 14025.

Comparison of the environmental performance of Metal Composite Panels using EPD information shall be based on the product's use and impacts at the building level, and therefore EPDs may not be used for comparability purposes when not considering the building energy use phase as instructed under this PCR. In general, EPDs may not be used for comparability purposes when not considered in a construction works context. Given this PCR (UL 10010, V3.2) ensures products meet the same functional requirements, comparability is permissible provided the information given for such comparison is transparent and the limitations of comparability explained.

Full conformance with the PCR for Metal Composite Panels allows EPD comparability only when all stages of a life cycle have been considered, when they comply with all referenced standards, use the same sub-category PCR, and use equivalent scenarios with respect to construction works. However, variations and deviations are possible.

Company information

Owner of the EPD: Arconic Architectural Products (AAP)

Contact: Sneh Kumar. Sneh.Kumar@arconic.com

Description of the organization: At Arconic Architectural Products (AAP), we amplify the visual impact of building design to make bold ideas even bolder. As a leading manufacturer of composite material, pre-painted heavy-gauge aluminum and bonded sheets, we define skylines all over the world with distinctive building façades.
We open a world of design possibilities with aluminum panels available in an endless range of colors, finishes, shapes and sizes. Our innovative products can be used across a variety of projects, including multi-use, public, education, retail and healthcare facilities. With the flexibility to integrate architectural systems, our versatile portfolio combines beauty with high performance, delivering durable and lightweight cladding solutions.
We are committed to providing exceptional quality and service, and our dedicated team works closely with architects, contractors and specifiers to help make their architectural vision a reality. With manufacturing facilities in North America and Europe, we serve the global market with finishes for bold building designs.

Name and location of production site:
Arconic Architectural Products
50 Industrial Boulevard
Eastman, Georgia, 31023

Product information

Product name: Reynobond® Aluminum Composite Material FR 4mm
Product identification: CSI division 07 42 13.23
UN CPC code: 7610

Product description: Reynobond® Composite Material consists of two sheets of coil-coated aluminum laminated on both sides of a fire-resistant (FR) core material. Highly durable, Reynobond® Composite Material is rigid yet flexible and integrates seamlessly with curtain walls. Weighing 3.4 times less than steel and 1.6 times less than pure aluminum, Reynobond® Composite Material is extremely lightweight. Its formability makes it an outstanding choice for design flexibility.

- Available in widths up to 62" and lengths up to 20'
- AAMA 611/2603/2604/2605 performance specification
- Tested to USA building code standards and listed with ICC-ES

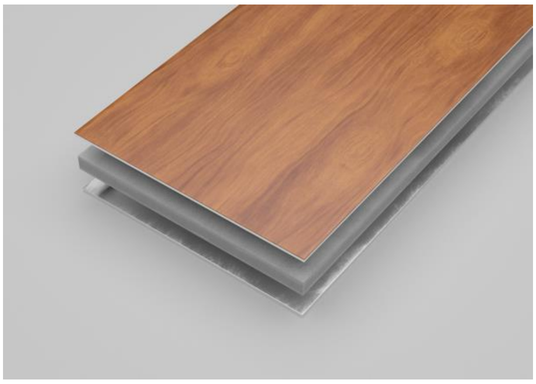


Figure 1: Reynobond® Product Image

Reynobond® Composite Material sheets can be used to create distinctive facades with varying colors, textures, and patterns, and are ideal for both external and internal applications in multi-use, commercial, education, public buildings, and retail settings. The flexibility and durability of aluminum, combined with a significant portfolio of colors and finishes, provides design flexibility to architects, specifiers and contractors.

Technical Data:

Specification	Unit	Value
Length	m	<6.172
Width	m	<1.575
Thickness	mm	4
Weight	kg/m^2	7.57
Tensile Strength	MPa	43.9
Modulus of Elasticity	MPa	1.21
R value of typical materials when continuous	m^2K/W	$4.5x10^{-3}$
Peel strength (ASTM D1781)	in-lb/in	> 22.5
Stiffness (EI)	MPa/cm^2	$1.28x10^4$
Thermal expansion	mm/m	2.4
Maximum allowable deflection		L/60
Flame Spread Index (ASTM E84)		<25
Self-Ignition Temperature	°F	824

Additional product information found here:

- Technical Documentation: https://panels.com/wp-content/uploads/resources/ReynobondBrochure.pdf
- Sheet Portfolio Brochure: https://arconic.com/documents/144101/221756/20-0005_SheetPortfolioBrochure.pdf/be72177b-f93b-d268-9267-5cec1910fb1d?t=1663953437973
- Environmental Management at Arconic: https://www.arconic.com/documents/42106/101790/Arconic-Environmental-Statement.pdf

Geographical scope: The geographical scope of the raw material acquisition is North America and Europe. The geographical scope of the manufacturing portion of the life cycle is North America. Distribution from the manufacturing location is to the United States. The end of life (disposal of the product) occurs within the United States.

Market(s) of applicability: North America

LCA information

Declared unit: 100 square meters (1076.4 square feet) of metal product.

	Value	Unit
Declared unit	100	m^2
Mass	7.52E+02	kg
Conversion factor to 1 kg	1.33E-03	n/a

Time representativeness: 2022

Database(s) and LCA software used: Sphera LCA for Experts 10.8

EPD Type: Product Specific EPD

Description of system boundaries: Cradle to gate with options (C1–C4 + D)

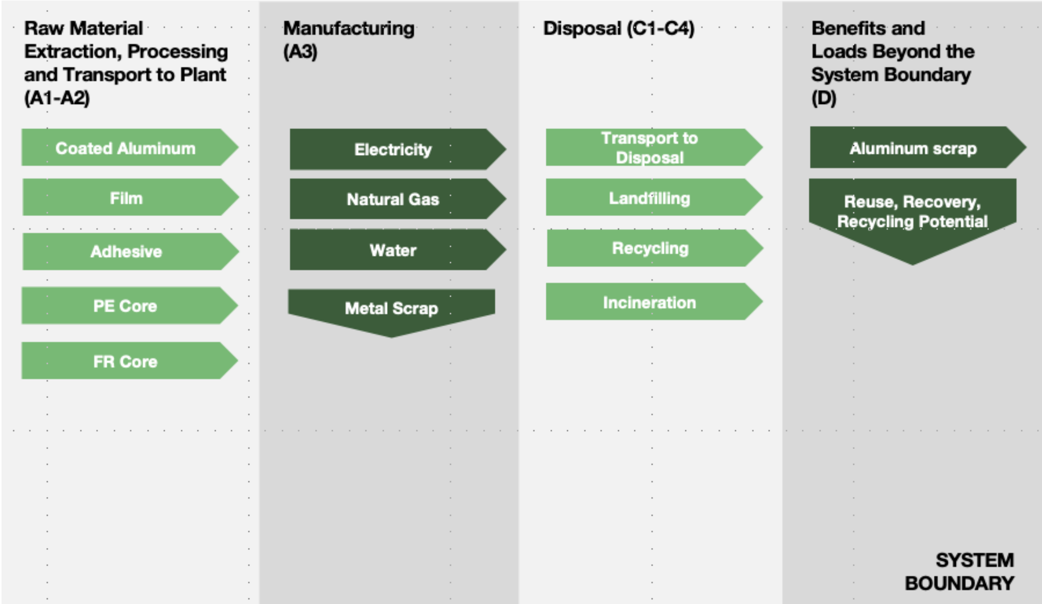


Figure 2: System Diagram

Note: No known flows are deliberately excluded from this EPD.

Manufacturing:
This stage includes an aggregation of raw material extraction, supplier processing, delivery, manufacturing, and packaging.

Energy resources used in the manufacturing process include electricity and natural gas.

Included in stage are:
1. Extraction and processing of raw materials
2. Processing of recycled raw material from previous product system
3. Transportation of materials and packaging to the manufacturing location
4. Manufacturing products, including energy, water, and material usage and water disposal
5. Waste generation from manufacturing and disposal.

AAP Eastman's Reynobond® Composite Material is manufactured through a combination of rolling and finishing techniques. The purchased aluminum sheets are progressively thinned out in a rolling process until they reach their desired thickness. Then they are coated with a protective layer. The FR core is placed between two sheets. The whole assembly is bonded together using heat and pressure during lamination. Following lamination they are covered in a protective film.

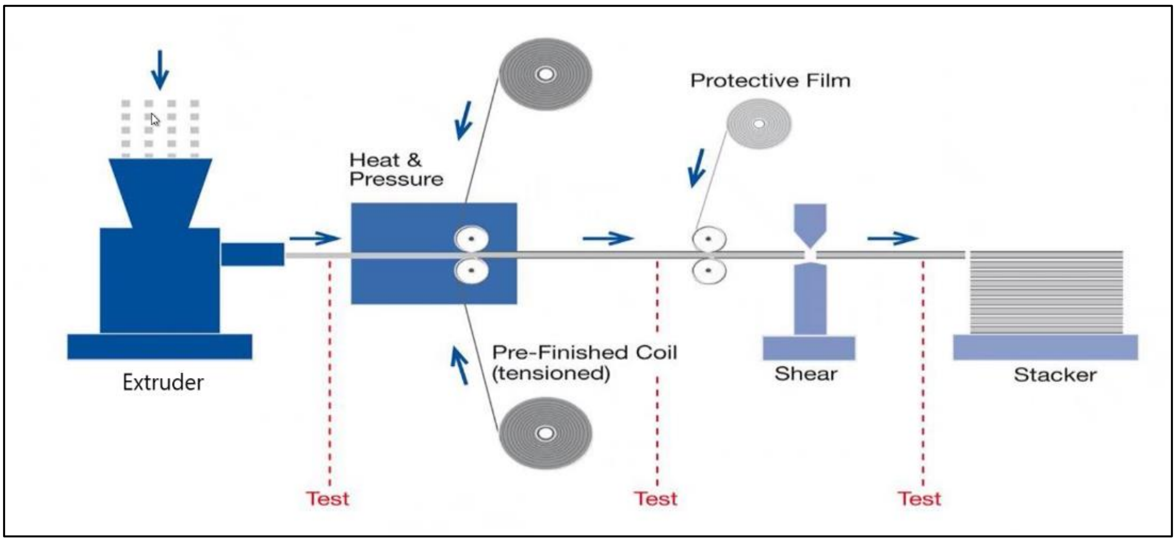


Figure 3: Manufacturing Description

Electricity: A regional dataset for electricity was used to model electricity use for the Eastman facility. Sub-meter specific electricity values were not available from the manufacturing facility. Annual electricity consumption was normalized to the functional unit of one meter squared of metal sheet.

End of life: For end-of-life, product waste disposal has been modeled as per guidelines in section 2.8.5 of Part A: Life Cycle Assessment Calculation Rules and Report Requirements. The product is sent to EOL facilities based on region requirements given in Part A PCR. No credits were taken for energy production from end-of-life processes. Cut-off criteria for recycling has been applied. Waste transport is assumed to be 160.93 kilometers.

Name		Value	Unit
Assumption for scenario development (description of deconstruction, collection, recovery, disposal method and transportation)	All waste has been classified according to regional-specific legislation as laid out in Section 2.8.5 in Part A: Life Cycle Assessment Calculation Rules and Requirements from UL Environment.		
Collection process (specified by type)	Collected separately	0.00E+00	kg
	Collected with mixed construction waste	7.52E+00	kg
Recovery (specified by type)	Reuse	0.00E+00	kg
	Recycling	2.59E+00	kg
	Landfill	4.93E+00	kg
	Incineration	0.00E+00	kg
	Incineration with energy recovery	0.00E+00	kg
Disposal (specified by type)	Product or material for final deposition	7.52E+00	kg
Removals of biogenic carbon (excluding packaging)		0.00E+00	kg CO_2

Module D: The recovery and reuse potential at end-of-life (Module D) of product and packaging waste takes the form of credits beyond the system boundaries. For Eastman's aluminum sheets and coils, these credits are calculated on the portion of aluminum not derived from recycled sources, in accordance with the methodology recommended by ISO 21930. Aluminum is assumed to be recycled.

Name	Value	Unit
Net energy benefit from energy recovery from waste treatment declared as exported energy in C3 (R>0.6)	0.00E+00	MJ
Net energy benefit from thermal energy due to treatment of waste declared as exported energy in C4 (R<0.6)	0.00E+00	MJ
Net energy benefit from material flow declared in C3 for energy recovery	0.00E+00	MJ
Process and conversion efficiencies	97% recycling efficiency	
Further assumptions for scenario development (e.g. further processing technologies, assumptions on correction factors);	The product fractions at end-of-life (aluminum and plastics) are sent to either recycling or landfill, following the product disposal assumptions from UL PCR Part A.	

Assumptions: Throughout this study, value choices and judgements that may have affected the LCA have been described. Additional decisions are summarized below:

- The inclusion of overhead energy data was determined appropriate due to the inability to sub-meter and isolate manufacturing energy from overhead energy.
- The use and selection of secondary datasets from Sphera's MLC database – The selection of which generic dataset to use to represent an aspect of a supply chain is a significant value choice. Collaboration between the LCA practitioner, the manufacturer, and Sphera LCA FE data experts was invaluable in determining best-case scenarios in the selection of data. However, no generic data can be a perfect fit. Improved supply chain specific data would improve the accuracy of results, however budgetary and time constraints also must be considered.

Cut-off Rules: Material inputs greater than 1% (based on total mass of the final product) were included within the scope of analysis. Material inputs less than 1% were included if sufficient data was available to warrant inclusion and/or the material input was thought to have significant environmental impact. Cumulative excluded material inputs and environmental impacts are less than 5% based on total weight of the functional unit.
Some material inputs may have been excluded within the MLC datasets used for this project. All MLC datasets have been critically reviewed and conform to the exclusion requirement of the PCR, Part A: "Calculation Rules for the Life Cycle Assessment and Requirements on the Background Report".

Data Quality: Overall, the data quality for this LCA is considered good. The geographic coverage, time coverage, and technological coverage are all good. The precision, consistency, and reproducibility are all high and the model is considered complete.

Allocation: General principles of allocation were based on ISO 14040/44. There are no products other than the product under study that are produced as part of the manufacturing processes. To derive a per-unit value for manufacturing inputs such as electricity, thermal energy and water, allocation based on total production by square meter of product was adopted. As a default, secondary MLC datasets use a physical basis for allocation.
Of relevance to the defined system boundary is the method in which recycled materials were handled. Throughout the study recycled materials were accounted for via the cut-off method. Under this method, impacts and benefits associated with the previous life of a raw material from recycled stock are excluded from the system boundary. Additionally, impacts and benefits associated with secondary functions of materials at end of life are also excluded (i.e., production into a third life or energy generation from the incineration plant). The study does include the impacts associated with reprocessing and preparation of recycled materials that are part of the bill of materials of the products under study.

Modules declared and geographical scope:

	Product stage			Construction process stage		Use stage							End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	**A1**	**A2**	**A3**	**A4**	**A5**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**C1**	**C2**	**C3**	**C4**	**D**
Modules declared	X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X
Geography	US/ EU	US/ EU	US										US	US	US	US	US

Content information

All values are reported according to the functional unit of one hundred square meters of aluminum sheets.

Product components	Weight, kg	Percentage by product mass%	Recycled Content%
Aluminum Sheet	2.62E+02	34.8%	23.5%
FR Core	4.66E+02	61.9%	0%
Film	5.44E-01	0.07%	0%
Adhesive	1.37E+01	1.82%	0%
Finishing Layer	1.07E+01	1.42%	0%
TOTAL	7.52E+02	100%	8.19%

Packaging materials	Weight, kg	Weight biogenic carbon, kg C/kg	Post-consumer material, weight-%
Cardboard	1.44E-01	4.30E-01	0%
Foam	9.68E-01	0.00E+00	0%
Paper	4.17E+00	4.30E-01	0%
Polyester	6.21E-03	0.00E+00	0%
Wood	5.55E-02	5.00E-01	0%
TOTAL	5.39E+00	1.36E+00	0%

Note #1: The product covered by this declaration do not contain any substances from the candidate list of SVHCs that constitute more than 0.1% of the weight of the products.

Note #2: Values for recycled content are based supplier declarations and when not available, a recycled content of 15% as a conservative assumption was considered, in line with AAP Eastman internal recycled content guidelines.

Impact Category Details

Impact Category	Acronym	Unit
IPCC AR5		
Global warming potential (100 years, includes biogenic CO2)	AR5 GWP incl	kg CO_2 eq
Global warming potential (100 years, excluding biogenic CO2)	AR5 GWP excl	kg CO_2 eq
TRACI 2.1 Indicators		
Global warming potential (100 years, includes biogenic CO_2)	GWP	kg CO_2 eq
Acidification potential of soil and water	AP	kg SO_2 eq.
Eutrophication potential	EP	kg N eq.
Ozone depletion of air	ODP	kg CFC-11 eq.
Use of fossil fuel resources	Resources	MJ, surplus energy
Smog formation potential	SFP	kg O_3 eq.
These six impact categories are globally deemed enough to be included in Type III environmental declarations. Other categories are being developed and defined and LCA should continue making advances in their development, however the EPD users shall not use additional measures for comparative purposes.		
Biogenic Carbon Indicators		
Biogenic Carbon Removal from Product	BCRP	kg CO_2 eq.
Biogenic Carbon Emission from Product	BCEP	kg CO_2 eq.
Biogenic Carbon Removal from Packaging	BCRK	kg CO_2 eq.
Biogenic Carbon Emission from Packaging	BCEK	kg CO_2 eq.
Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes	BCEW	kg CO_2 eq.
Calcination Carbon Emissions	CCE	kg CO_2 eq.
Carbonation Carbon Removals	CCR	kg CO_2 eq.
Carbon Emissions from Combustion of Waste from Non- Renewable Sources used in Production Processes	CWNR	kg CO_2 eq.
Resource Use Indicators		
Use of renewable primary energy	RPR_E	MJ LHV
Use of renewable primary energy as materials	RPR_M	MJ LHV
Total use of renewable primary energy resources	RPR_T	MJ LHV
Use of non-renewable primary energy	$NRPR_E$	MJ LHV
Use of non-renewable primary energy as materials	$NRPR_M$	MJ LHV
Total use of non-renewable primary energy resources	$NRPR_T$	MJ LHV
Secondary materials	SM	kg
Renewable secondary fuels	RSF	MJ
Non-renewable secondary fuels	NRSF	MJ
Recovered energy	RE	MJ
Net use of fresh water	FW	m^3
Waste and Output Flow Indicators		
Hazardous waste disposed	HWD	kg
Non-hazardous waste disposed	NHWD	kg
High-level radioactive waste	HLRW	kg
Intermediate- and low-level radioactive waste, conditioned, to final repository	ILLRW	kg
Components for reuse	CRU	kg
Materials for recycling	MR	kg
Materials for energy recovery	MER	kg
Exported electrical energy	EEE	MJ
Exported thermal energy	EET	MJ

Results of the environmental performance indicators

LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks.

Mandatory impact category indicators according to ISO 21930

Impact Category	A1	A2	A3	C1	C2	C3	C4	D
IPCC AR5								
GWP100, incl biogenic carbon	2.78E+03	4.04E+01	3.00E+01	0.00E+00	6.10E+00	0.00E+00	1.10E+01	-4.03E+02
GWP100, excl biogenic carbon	2.78E+03	4.04E+01	3.69E+01	0.00E+00	6.11E+00	0.00E+00	1.11E+01	-4.03E+02
TRACI LCIA Impacts (North America)								
GWP	2.71E+03	3.94E+01	3.52E+01	0.00E+00	5.97E+00	0.00E+00	1.06E+01	-3.97E+02
ODP	1.09E+01	2.83E-01	3.80E-02	0.00E+00	1.72E-02	0.00E+00	5.60E-02	-1.91E+00
AP	3.02E-01	2.04E-02	6.88E-03	0.00E+00	1.80E-03	0.00E+00	8.89E-02	-4.55E-02
EP	8.94E-06	1.17E-13	2.71E-12	0.00E+00	1.78E-14	0.00E+00	5.18E-13	-2.36E-09
ADP_{fossil}	3.98E+03	7.47E+01	6.08E+01	0.00E+00	1.14E+01	0.00E+00	2.12E+01	-3.19E+02
SFP	1.16E+02	7.35E+00	8.30E-01	0.00E+00	3.88E-01	0.00E+00	1.00E+00	-1.82E+01
Carbon Emissions and Uptake								
BCRP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCEP	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCRK	0.00E+00	0.00E+00	1.02E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCEK	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCEW	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CCR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CWNR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Resource Use Indicators								
RPR_E [MJ]	1.13E+04	2.23E+01	2.01E+02	0.00E+00	3.54E+00	0.00E+00	2.03E+01	-2.42E+03
RPR_M [MJ]	3.71E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RPR_T [MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
$NRPR_E$ [MJ]	2.67E+04	5.25E+02	6.21E+02	0.00E+00	7.99E+01	0.00E+00	1.64E+02	-4.19E+03
$NRPR_M$ [MJ]	1.45E+03	0.00E+00	2.62E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
$NRPR_T$ [MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SM [kg]	2.76E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF [MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF [MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RE [MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW [m^3]	3.50E+01	7.35E-02	1.38E-01	0.00E+00	1.17E-02	0.00E+00	2.12E-02	-7.32E+00
Output Flows and Waste Categories								
HWD	7.75E-02	7.09E-08	8.64E-07	0.00E+00	1.08E-08	0.00E+00	4.05E-08	-2.70E-06
NHWD	6.66E+02	5.12E-02	5.95E+00	0.00E+00	7.96E-03	0.00E+00	4.98E+02	-1.43E+02
HLRW	8.72E-04	1.87E-06	4.96E-05	0.00E+00	2.86E-07	0.00E+00	1.95E-06	-2.12E-04
ILLRW	7.00E-01	1.58E-03	4.26E-02	0.00E+00	2.41E-04	0.00E+00	1.74E-03	-1.32E-01
CRU	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Impact Category	A1	A2	A3	C1	C2	C3	C4	D
MR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MER	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Note: The results of the end-of-life stage (module C) should be considered when using the results of the production stage (modules A1-A3).

LCA Interpretation

Overall impacts are driven by the raw material extraction to manufacturing life cycle stages (A1-A3) Aluminum is the primary driver across categories. Though some raw materials are transported vast distances, the inbound transportation module (A2) has a modest contribution to overall impact.

Scenario Analysis

Currently, the aluminum industry produces 1.1 billion metric tons of carbon dioxide annually, representing 2% of all human-made emissions. The industry must reduce its carbon emissions from over a billion metric tons to around fifty million metric tons to meet a 1.5-degree scenario. (Aluminium Stewardship Initiative, 2022) Primary aluminum production, from mining to ingot casting, is responsible for 95% of annual CO2e emissions. Decarbonization of electrical supply to smelters represents the greatest opportunity to reduce carbon emissions in the aluminum industry (Tabereaux, 2023).

For this study, a regional average dataset for the US, covering all life cycle stages from mining to aluminum coil production, was used to represent A1-A3 impacts for aluminum inputs. The carbon intensity (GWP in kg CO2 eq per kg) associated with AAP aluminum sheet inputs from their suppliers is included in the table below. These values are compared to two low carbon footprint options that are available in the current aluminum market according to the Aluminum Stewardship Initiative (ASI) (Aluminium Stewardship Initiative, 2022)Though some raw materials are transported vast distances, the inbound transportation module (A2) has a modest contribution to overall impact.

Scenarios	Global Warming Potential (kg CO_2 eq/kg)
Baseline – Reynobond® FR 4mm	7.51
Low-Carbon Footprint Option 1	4.00
Low-Carbon Footprint Option 2	2.00

If the Eastman facility ends up sourcing primarily aluminum from low-carbon intensity sources, the environmental impact of the Reynobond® products is expected to decrease. Given that only potential global warming impact values were available through ASI, this scenario analysis focuses on global warming potential (GWP).

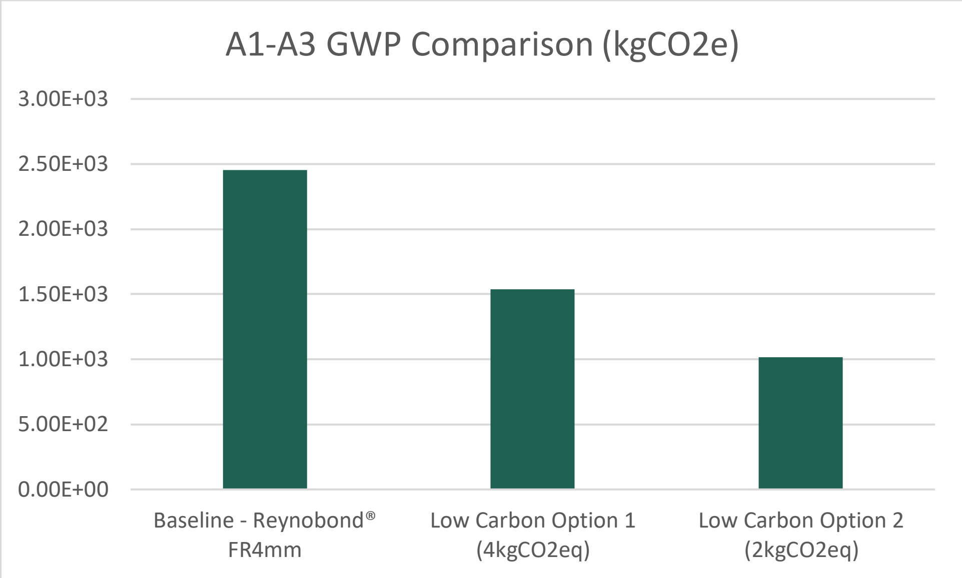


Figure 4: Scenario Analysis Results

Scenarios	GWP (kgCO2e)	Difference with Baseline
Baseline - Reynobond® FR 4mm	2.46E+03	NA
Low Carbon Option 1 (4kgCO2eq)	1.54E+03	-37%
Low Carbon Option 2 (2kgCO2eq)	1.01E+03	-59%

Additional environmental information

Arconic Architectural Products LLC (AAP) is a subsidiary of Arconic, a global technology, engineering and advanced manufacturing leader that creates breakthrough products that shape industries. AAP products have helped advance innovation and building design and can be found in skylines the world over. Our Reynobond® product helps reduce the environmental impact from construction by using infinitely recyclable aluminum metal, and helps extend the life of buildings with durable, low-maintenance products that provide modern aesthetics.

Additional certifications and standards:
Arconic's Eastman, GA manufacturing facility is certified to ISO 9001
Arconic's environmental management process and system aligns with the ISO 14001 Environmental Management Systems standard.

Additional information regarding Arconic's commitment to sustainability can be found at:
https://www.arconic.com/documents/d/arconic/2023-sustainability-report;download=true

References

Aluminium Stewardship Initiative. (2022, February 23). *Issue Brief: Low Carbon Aluminium*. Retrieved from Aluminium Stewardship Initiative : https://aluminium-stewardship.org/low-carbon-aluminium

Arconic Architectural Products. (2024). *Reynobond ® Composite Material Brochure.* Retrieved from https://arconic.com/documents/d/aap-northamerica/23-0006_architecturalmarketbrochure

IPCC. (2013). *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.* Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press.

ISO. (2006). *ISO 14025: Environmental labels and declarations - Type III environmental declarations - Principles and procedures.* Geneva: International Organization for Standardization.

ISO. (2006). *ISO 14040/Amd 1:2020: Environmental management - Life cycle assessment - Principles and framework.* Geneva: International Organization for Standardization.

ISO. (2006). *ISO 14044/Amd 1:2017/Amd 2:2020: Environmental Management - Life cycle assessment - Requirements and Guidelines.* Geneva: International Organization for Standardization.

ISO. (2017). *ISO 21930: Sustainability in buildings and civil engineering works - Core rules for environmental product declarations of construction products and services.* Geneva: International Organization for Standardization.

Tabereaux, A. (2023, March 8). The Shift Toward Renewable Power in Aluminum Smelting. *Light Metal Age*.

UL Environment. (2018). *Part A: Life Cycle Assessment Calculation Rules and Report Requirements, UL 10010, V3.2.*

UL Environment. (2018b). *Part B: Insulated Metal Panels, Metal Composite Panels, and Metal Cladding: Roof and Wall Panels.*

US EPA. (2012). *TRACI: The Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts. Version 2.1 - User Guide*. Retrieved from https://nepis.epa.gov/Adobe/PDF/P100HN53.pdf

EPD®

www.environdec.com