Environmental Product Declaration

IN ACCORDANCE WITH ISO 14025 AND ISO 21930:2017

Program Operator: Smart EPD®
www.smartepd.com

SmartEPD-2024-018-0137-01

Symphony M and Symphony M 70 RX

Date of Issue	Expiration date	Last updated
Jun 11, 2024	**Jun 11, 2029**	**Feb 27, 2025**

Refer to the EPD Library at www.smartepd.com for the latest EPD listing information

General Information

CertainTeed

20 Moores Rd, Malvern, PA 19355

888-233-8990

sustainability@saint-gobain.com certainteed.com

Product Name:	Symphony M and Symphony M 70 RX
Functional Unit:	0.093 m2 of installed product
Declaration Number:	SmartEPD-2024-018-0137-01
Date of Issue:	June 11, 2024
Expiration:	June 11, 2029
Last updated:	February 27, 2025
EPD Scope:	Cradle to gate with other options A1 - A3, A4, A5, C1 - C4
Market(s) of Applicability:	North America

General Organization Information

CertainTeed Corporation, a subsidiary of Saint-Gobain, is a leading North American manufacturer of interior building materials including gypsum, ceilings, and insulation as well as exterior building materials which include roofing, vinyl siding, trim, and water protection.

Further information can be found at: https://www.certainteed.com/products/ceiling-wall-systems-products/symphony-m-70-rx-symphony-m-80-rx

Limitations, Liability, and Ownership

Environmental declarations from different programs (ISO 14025) may not be comparable. Comparison of the environmental performance of products 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 whole building life cycle. EPD comparability is only possible when all stages of a life cycle have been considered. However, variations and deviations are possible. Example of variations: Different LCA software and background LCI datasets may lead to differences results for upstream or downstream of the life cycle stages declared. The EPD owner has sole ownership, liability, and responsibility for the EPD.

Reference Standards

Standard(s):	ISO 14025 and ISO 21930:2017
Core PCR:	Part A v3.2, UL PCR for Building-Related Products and Services Part A Date of issue: December 01, 2018

Sub-category PCR:	Part B: Non-Metal Ceiling and Interior Wall Panels Date of issue: April 13, 2021 Valid until: April 13, 2026
Sub-category PCR review panel:	Contact Smart EPD for more information.
General Program Instructions:	Smart EPD General Program Instructions v.1.0, November 2022

Verification Information

LCA Author/Creator:	Saint-Gobain North American ESG Sustainability Group | sustainability@saint-gobain.com
EPD Program Operator:	Smart EPD | info@smartepd.com | www.smartepd.com 585 Grove St., Ste. 145 PMB 966, Herndon, VA 20170, USA
Verification:	Independent critical review of the LCA and data, according to ISO 14044 and ISO 14071: External Jana Fogarty | TrueNorth Collective | jana.fogarty@truenorthcollective.net Independent external verification of EPD, according to ISO 14025 and reference PCR(s): External Jana Fogarty | TrueNorth Collective | jana.fogarty@truenorthcollective.net

Product Information

Functional Unit:	0.093 m2 of installed product
Mass:	0.49 kg
Reference Service Life:	30 Years
Product Specificity:	✗ Product Average ✓ Product Specific

Product Description

The Symphony m family of products have a standard mineral fiber core, manufactured at the CertainTeed Ceilings L'Anse, MI facility, with a laminate and paint finishing that are applied at the Plymouth facility. Each panel in the Symphony m family offers high performance in sound absorption, sound attenuation, washability, particle emission and light reflectance. Each panel in the Symphony m family is VOC (Volatile Organic Compounds) compliant to CDPH/EHLB Std. Method v1.2, 2017

Product Specification
This Enviormental Product Declaration (EPD) includes Symphony m and Symphony m 70 Rx.
These products fall under ASTM E1264 Section 5.2 designation as Type IV – Mineral base with membrane-faced overlay.
The modifications typically involve modifications to shape, thickness, density, and coating composition.

This report addresses the entire Symphony m / Symphony m 70 Rx product range and focuses on the highest volume products within the family.

Those products within the family that differ are well represented within the scope of this study.

Further information can be found at: https://www.certainteed.com/products/ceiling-wall-systems-products/symphony-m-collection

Product Specifications

Product Classification Codes:	EC3 - Finishes -> CeilingPanel -> AcousticalCeilings
Sound absorption coefficient (NRC) (ASTM C423):	0.70-0.75 %
Light reflectance (ASTM E1477):	0.90 %
Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum (CAC)(ASTM E1414 and Classification E413):	35-40 dB
Surface burning characteristics of building materials (ASTM E84, ASTM E1264):	Class A flame spread/smoke developed
Declared thickness:	1.905 cm
Surface weight per declared unit:	5.27 kg/m2
Density per declared unit:	276.6 kg/m3

Material Composition

Material/Component Category	Origin	% Mass
Mineral Wet Felt	US	80-90
Laminate	Netherlands	1-10
Glue	US	1-10
Paint	US	1-10

Packaging Material	Origin	kg Mass
Pallet	US	2.50E-02
Stretch Wrap	US	3.46E-03
Label	US	1.69E-04
Sleeve	US	1.20E-02

Biogenic Carbon Content	kg C per m2 of installed product
Biogenic carbon content in product	None
Biogenic carbon content in accompanying packaging	-0.00463

Hazardous Materials
No regulated hazardous or dangerous substances are included in this product.

EPD Data Specificity

Primary Data Year: March 1, 2022, to February 28, 2023

Manufacturing Specificity:

- ✗ Industry Average
- ✗ Manufacturer Average
- ✓ Facility Specific

Averaging:

This is a product specific EPD manufactured in one facility, Plymouth, WI. Multiple products within the similar product lines were analyzed and a weighted average was calculated to showcase the results.

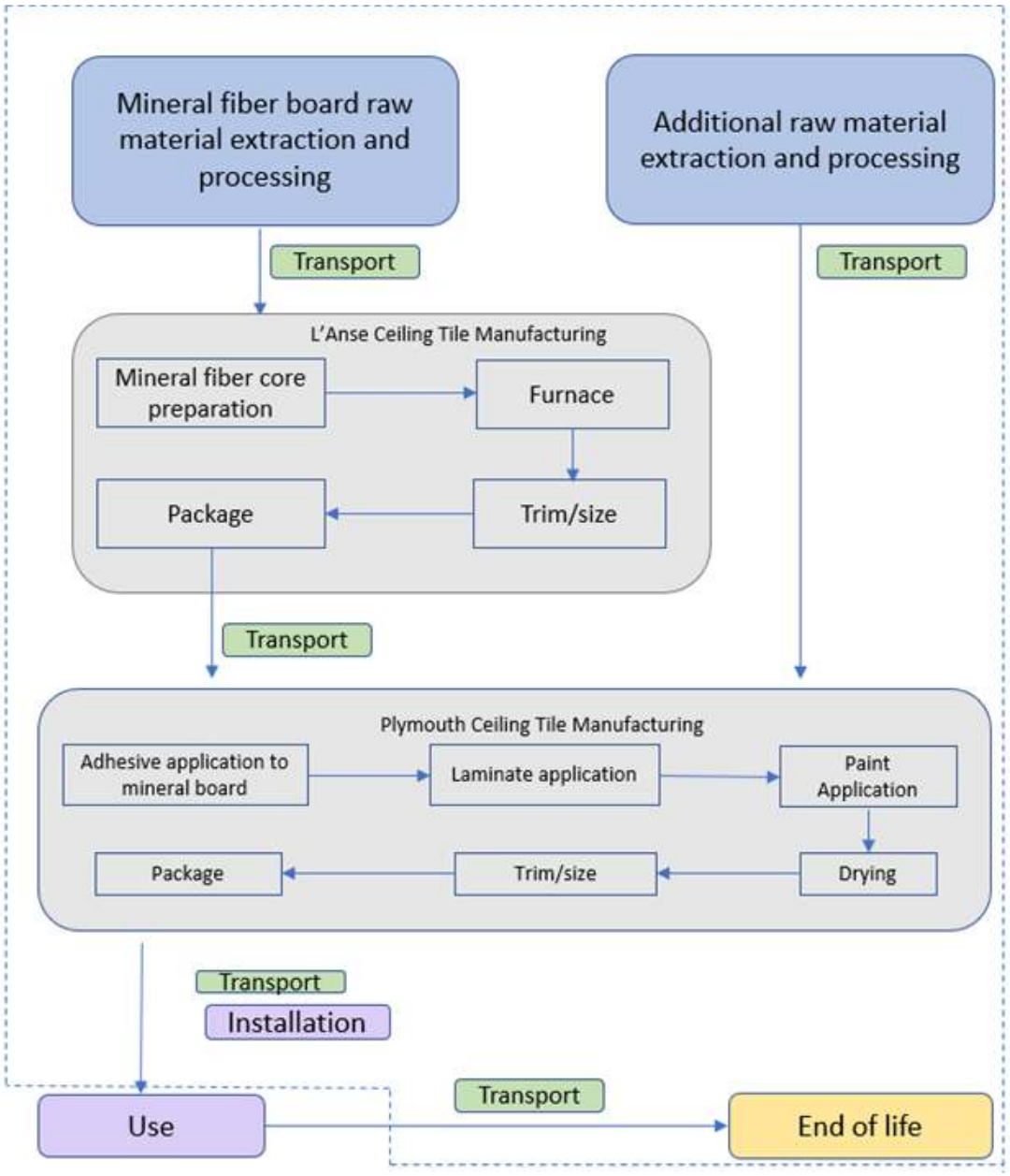
System Boundary

Production	A1	Raw material supply	✓
	A2	Transport	✓
	A3	Manufacturing	✓
Construction	A4	Transport to site	✓
	A5	Assembly / Install	✓
Use	B1	Use	ND
	B2	Maintenance	ND
	B3	Repair	ND
	B4	Replacement	ND
	B5	Refurbishment	ND
	B6	Operational Energy Use	ND
	B7	Operational Water Use	ND
End of Life	C1	Deconstruction	✓
	C2	Transport	✓
	C3	Waste Processing	✓
	C4	Disposal	✓
Benefits & Loads Beyond System Boundary	D	Recycling, Reuse Recovery Potential	ND

Plants

CertainTeed Architectural Solutions
1415 Pilgrim Rd, Plymouth, WI, USA

Product Flow Diagram



Software and Database

LCA Software:	LCA for Experts v. 10.7
LCI Foreground Database(s):	GaBi Professional Database v. 2022
LCI Background Database(s):	Ecoinvent v. 3.9.1

Data Quality

Wherever secondary data is used, the study adopts critically reviewed data for consistency, precision, and reproducibility to limit uncertainty. The data sources used are complete and representative of North America (depending on the material source) in terms of the geographic and technological coverage and are less than ten years old. Any deviations from these initial data quality requirements for secondary data are documented in the report. The results of an LCA are only as good as the quality of input data used. Important data quality factors include precision (measured, calculated, or estimated), completeness, consistency, and reproducibility. The primary data from the manufacturing facilities was from March 1, 2022, to February 28, 2023. Each background dataset used was taken from the Sphera LCA FE, US LCI, and Ecoinvent v3.9.1 databases. These databases are widely distributed and referenced within the LCA community and are either partially or fully critically reviewed.

Life Cycle Module Descriptions

Raw Materials and Product Recipe (A1)
A thorough analysis of the material inputs was completed for the inventory of this study.

Raw Material Transportation (A2)
Raw materials are transported to the manufacturing sites by standard freight truck, train, or ocean freighters. Unless otherwise noted, transport vehicles are fueled with diesel fuel.

Manufacturing (A3)
A detailed analysis of the ceiling tile manufacturing process was completed by the Saint-Gobain North American Environmental, Social and Governance (ESG) department to observe and understand the manufacturing processes for the mineral fiber board manufacture. To produce the mineral fiber board, the core component raw materials are mixed and formed into the product. After the raw materials have been processed, they are added to the mix tank where they are combined. The resulting slurry is then further filtered and processed to remove any impurities. The processed slurry is then sent to the board machine, where the wet mixture is formed into boards with the excess water being drained from below. The board sections are baked in a large oven heated with natural gas and waste steam from the nearby biomass power plant to dry the panels. The panel sections of mineral fiber board are then trimmed and cut to size. Coating is then applied, and the completed tile is heated a second time to cure the coating. Finally, the tiles are packaged for shipping to Plymouth. It is important to note that the waste from any process in the mineral wool ceiling tile manufacturing process that produces wet or dry scrap is collected and reused. The dry dust and trimmings as well as the wet scrap are mixed with water and pulped to produce “broke”, which is then added to the mix tank along with the other raw materials. In addition, the wastewater, along with the impurities from the mix tank, is transferred to a settling pond. The water from the settling pond is then used to irrigate fields on site, and the solid waste is used as land applied fertilizer. The L’Anse manufacturing facility receives all its electricity from a nearby biomass electricity plant and the waste steam from that plant is also used to replace some of the natural gas used to heat the curing ovens. The waste steam offsets the natural gas usage by approximately 20%. At the Plymouth facility, when the board (mineral fiber for Symphony m) are received, glue is applied for the laminate to adhere to the board. Then paint is applied before the panels are put through an oven to dry. The panels are then cut to size, packaged and shipped.

Packaging (A3)
Packaging of the final product after production is included in the life cycle assessment. The product is stacked in cardboard sleeves, wrapped in shrink wrap, and paper labels affixed. The packages of product in cardboard sleeves are then stacked on a pallet with other finished product and wrapped in shrink wrap again before final shipping. The purchased amount of packaging material was provided by the Plymouth facility personnel and the weight of each material per square foot of finished product was calculated. The average weight of the packaging material was assumed to be the same for each of the product categories included in this study.

Transportation (A4)
Final products are transported on trucks throughout the United States. This study assumed an average of 800 km for the final shipment of product based on the assumption within the PCR.

Product Installation (A5)
Ceiling Panels are installed by hand by maneuvering and tilting the panels above the ceiling grid, then carefully resting the panels on the grid. Panels for borders are cut to size before installation with a handheld cutting tool.

Use (B1-B7)
The use phase is excluded from the study.

End of Life (C1-C4)
This study assumes a product service life of 30 years. The selected service life used in this study reflects the indicated in the PCR. There is no industry consensus for end-of-life scenarios, per the PCR guidance. For this reason, the study will assume landfill disposal at end of life.

LCA Discussion

Allocation Procedure

The Plymouth, WI facility is the only location that produces the Symphony m Ceiling Panel product lines in the United States for CertainTeed Corporation. However, there are additional products produced at this location. Allocation was conducted based on the production mass data provided by the facilities as a percentage of the overall production mass at each facility. Life cycle analysis requires that assumptions are made to constrain the project boundary or model processes when little to no data is available.

Cut-off Procedure

All inputs and outputs to a process shall be included in the calculation of results, for which data are available. Any data gaps are filled by conservative assumptions with average, generic, or proxy data. Any such assumptions are documented in Section 4.1. For hazardous substances, as defined by the U.S. Resource Conservation and Recovery Act (RCRA), the following requirements apply: The Life Cycle Inventory (LCI) of hazardous substances will be included, if the inventory is available. If the LCI for a hazardous substance is not available, the substance will appear as an input in the LCI of the product, if its mass represents more than 0.1% of the product composition. If the LCI of a hazardous substance is approximated by modeling another substance, documentation will be provided. This LCA is in compliance with the cut-off criteria since no known processes were neglected or excluded from this analysis outside of the specific items outside the system boundary

Renewable Electricity

Energy Attribute Certificates (EACs) such as Renewable Energy Certificates (RECs) or Power Purchase Agreements (PPAs) are included in the baseline reported results:	✕ No

Scenarios

Transport to the building/construction site (A4)
A4 Module

Fuel Type:	Diesel
Liters of Fuel:	30 l/100km
Vehicle Type:	Standard Freight Trailer
Transport Distance:	800 km
Capacity Utilization:	85 %
Packaging Mass:	0.0169 kg

Gross density of products transported:	276.6 kg/m3
Weight of products transported:	0.49 kg
Capacity utilization volume factor:	<1
Assumptions for scenario development:	Final products are transported on trucks throughout the United States. This study assumed an average of 800 km for the final shipment of product based on the assumption within the PCR.

Installation in to the building/construction site (A5)

A5 Module

Installation Scrap Rate Assumed:	7 %
Product Lost per Functional Unit:	0.0343 kg
Waste Materials at the Construction Site Before Waste Processing:	0.054 kg
Biogenic Carbon Contained in Packaging:	-0.00455 kg
Assumptions for scenario development:	Ceiling Panels use a suspended grid system to hold them place. This study covers the ceiling panels only and does not include the grid system. Ceiling Panels are installed by hand by maneuvering and tilting the panels above the ceiling grid, then carefully resting the panels on the grid. Panels for borders are cut to size before installation with a handheld cutting tool. As required by the PCR, this study assumes a 7% scrap rate of the ceiling panels from the installation of the product. Packaging disposal assumptions based off the Product Category Rules for Building-Related Product and Services: Part A – Life Cycle Assessment Calculation Rules and Report Requirements. Version 3.2. December 2018. UL Environment.

End of Life (C1 - C4)

C1 - C4 Modules

Disposal

Product or Material for Final Disposal:	0.0147 kg

Assumptions for scenario development:

This study assumes a product service life of 30 years. The selected service life used in this study reflects the indicated in the PCR. Product disposal assumptions based off the Product Category Rules for Building-Related Product and Services: Part A – Life Cycle Assessment Calculation Rules and Report Requirements. Version 3.2. December 2018. UL Environment.

Results

Environmental Impact Assessment Results

IPCC AR5 GWP 100, TRACI 2.1
per 0.093 m2 of installed product .
LCIA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks.

Symphony m - TRACI Overall Environmental Impact Potentials

Impact Category	Method	Unit	A1A2A3	A4	A5	C1	C2	C3	C4
GWP-total [including biogenic carbon]	IPCC AR5 GWP 100	kg CO2 eq	6.30e-1	3.68e-2	2.08e-2	0	1.61e-3	0	8.21e-3
GWP-fossil [excluding biogenic carbon]	IPCC AR5 GWP 100	kg CO2 eq	6.95e-1	3.68e-2	1.73e-2	0	1.61e-3	0	6.89e-3
ODP	TRACI 2.1	kg CFC 11 eq	3.04e-9	1.37e-12	1.72e-14	0	6.02e-14	0	1.52e-17
AP	TRACI 2.1	kg SO2 eq	3.56e-3	2.18e-4	7.80e-5	0	9.55e-6	0	3.21e-5
EP	TRACI 2.1	kg N eq	1.08e-3	1.21e-5	2.69e-5	0	5.29e-7	0	1.14e-5
POCP	TRACI 2.1	kg O3 eq	3.24e-2	6.01e-3	2.72e-4	0	2.63e-4	0	8.26e-5
ADP-fossil	TRACI 2.1	MJ	7.72e-1	6.43e-2	2.31e-3	0	2.81e-3	0	6.24e-4

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

GWP = Global Warming Potential, 100 years (may also be denoted as GWP-total, GWP-fossil (fossil fuels), GWP-biogenic (biogenic sources), GWP-luluc (land use and land use change)), ODP = Ozone Depletion Potential, AP = Acidification Potential, EP = Eutrophication Potential, SFP = Smog Formation Potential, POCP = Photochemical oxidant creation potential, ADP-Fossil = Abiotic depletion potential for fossil resources, ADP-Minerals&Metals = Abiotic depletion potential for non-fossil resources, WDP = Water deprivation potential, PM = Particular Matter Emissions, IRP = Ionizing radiation, human health, ETP-fw = Eco-toxicity (freshwater), HTP-c = Human toxicity (cancer), HTP-nc = Human toxicity (non-cancer), SQP = Soil quality index.

Global Warming Potential or Climate Change is an indicator aimed at including in a single value the added effect of all the substances contributing to the greenhouse effect. Global Warming Potential (GWP-total) includes biogenic carbon, fossil carbon, land use, and land use change. To calculate GWP-total within the above table, the equation below is used:

- GWP-total = GWP-biogenic + GWP-fossil + GWP-luluc
- GWP-total or GWPtotal (including biogenic) is the sum of GWP-biogenic, GWP-fossil, and GWP-luluc.
- GWP-biogenic only includes biogenic carbon, which is carbon that is stored in bio-sourced materials, like plants, trees, and soil. This excludes fossil.
- GWP-fossil or GWPtotal (excluding biogenic) only includes fossil carbon, which is the carbon dioxide emitted when fossil fuels like coal, oil, or natural gas are combusted. This excludes biogenic.
- GWP-luluc only includes the greenhouse gas emissions that arise in connection with changes in the specified carbon stock as a result of land use and land use change, such as deforestation.

Depending on the required or optional standards, GWP can be reported with different methods and indicators, including United States Environmental Tool for Reduction and Assessment of Chemicals and Other Environmental Impacts (TRACI 2.1, etc.), Intergovernmental Panel on Climate Change (IPCC) Assessment Report (AR5, AR6, etc.), Environmental Footprint (EF 3.0, 3.1), and/or EN 15804.GWP can be reported on a time frame such as GWP 100 for a 100-year time horizon.

Comparisons cannot be made between product-specific or industry average EPDs at the design stage of a project, before a building has been specified. Comparisons may be made between product-specific or industry average EPDs at the time of product purchase when product performance and specifications have been established and serve as a functional unit for comparison. Environmental impact results shall be converted to a functional unit basis before any comparison is attempted. Any comparison of EPDs shall be subject to the requirements of ISO 21930 or EN 15804. EPDs are not comparative assertions and are either not comparable or have limited comparability when they have different system boundaries. EPDs are not comparative assertions and are either not comparable or have limited comparability when they have different system boundaries, are based on different product category rules or are missing relevant environmental impacts. Such comparison can be inaccurate, and could lead to erroneous selection of materials or products which are higher-impact, at least in some impact categories.

Resource Use Indicators

per 0.093 m2 of installed product .

Symphony m - Primary Resource Use

Indicator	Unit	A1A2A3	A4	A5	C1	C2	C3	C4
RPRE	MJ	1.55e+0	0	1.34e-3	0	0	0	5.97e-4
RPRM	MJ	0	0	0	0	0	0	0
RPRT	MJ	1.55e+0	0	1.34e-3	0	0	0	5.97e-4
NRPRE	MJ	7.80e+0	4.68e-1	1.76e-2	0	2.05e-2	0	4.82e-3
NRPRM	MJ	0	0	0	0	0	0	0
NRPRT	MJ	7.80e+0	4.68e-1	1.76e-2	0	2.05e-2	0	4.82e-3
SM	kg	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0
FW	m3	1.59e-2	0	5.40e-6	0	0	0	1.34e-6
RE	MJ	0	0	0	0	0	0	0

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

RPRE or PERE = Renewable primary resources used as energy carrier (fuel), RPRM or PERM = Renewable primary resources with energy content used as material, RPRT or PERT = Total use of renewable primary resources with energy content, NRPRE or PENRE = Non-renewable primary resources used as an energy carrier (fuel), NRPRM or PENRM = Non-renewable primary resources with energy content used as material, NRPRT or PENRT = Total non-renewable primary resources with energy content, SM = Secondary materials, RSF = Renewable secondary fuels, NRSF = Non-renewable secondary fuels, RE = Recovered energy, ADPF = Abiotic depletion potential, FW = Use of net freshwater resources, VOCs = Volatile Organic Compounds.

Waste and Output Flow Indicators

per 0.093 m2 of installed product .

Symphony m - Waste Indicators

Indicator	Unit	A1A2A3	A4	A5	C1	C2	C3	C4
HWD	kg	1.04e-6	0	2.88e-12	0	0	0	1.19e-12
NHWD	kg	2.24e-1	0	2.99e-2	0	0	0	1.28e-2
HLRW	kg	1.71e-7	0	1.47e-10	0	0	0	5.73e-11
ILLRW	kg	1.45e-4	0	1.31e-7	0	0	0	5.11e-8
CRU	kg	2.78e-1	0	0	0	0	0	0

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

HWD = Hazardous waste disposed, NHWD = Non-hazardous waste disposed, RWD = Radioactive waste disposed, HLRW = High-level radioactive waste, ILLRW = Intermediate- and low-level radioactive waste, CRU = Components for re-use, MFR or MR = Materials for recycling, MER = Materials for energy recovery, MNER = Materials for incineration, no energy recovery, EE or EEE = Recovered energy exported from the product system, EET = Exported thermal energy.

Carbon Emissions and Removals

per 0.093 m2 of installed product .

Indicator	Unit	A1A2A3
BCRP	kg CO2	0
BCEP	kg CO2	0
BCRK	kg CO2	-4.63e-3
BCEK	kg CO2	0
BCEW	kg CO2	0
CCE	kg CO2	0
CCR	kg CO2	0
CWNR	kg CO2	0
BCCPA	kg CO2	0

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

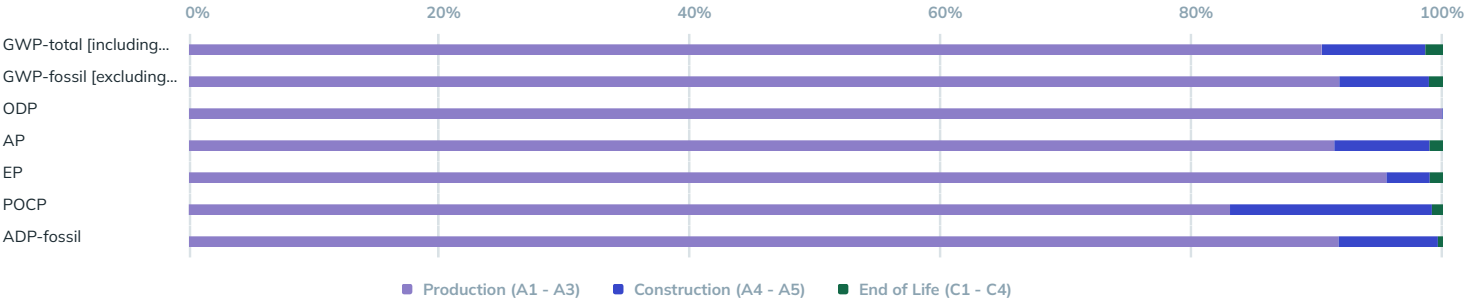
BCRP = Biogenic Carbon Removal from Product, BCEP = Biogenic Carbon Emission from Product, BCRK = Biogenic Carbon Removal from Packaging, BCEK = Biogenic Carbon Emission from Packaging, BCEW = Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes, CCE = Calcination Carbon Emissions, CCR = Carbonation Carbon Removals, CWNR = Carbon Emissions from Combustion of Waste from Non-Renewable Sources used in Production Processes, GWP-luc = Carbon Emissions from Land-use Change.

Impact Scaling Factors

Product Name and/or Product Attribute	Product Specific Functional/Declared Unit Multiplier

Interpretation

Based on the results from the life cycle assessment, the life cycle impacts are strongly driven by the raw materials and manufacturing processes. Increasing energy efficiency would help to reduce the overall environmental impacts. If possible, incorporating more recycled content, replacing virgin mineral wet felt, into the product will help reduce the environmental impacts of the raw materials stage in the life cycle of the ceiling panels. As recycled content increases, the raw materials driving impacts will decrease, thus improving the overall environmental impacts. The mineral wet felt is the largest contributor to the raw material impacts for the ceiling product. This material was responsible for more than 70% of the environmental impact potentials in several categories. Increasing recycled content, replacing mineral wet felt as mentioned above, will help decrease the usage of these larger contributors to the impacts. Although the Mineral Board manufactured at the L'Anse site is the main driver of the raw material GWP, the paint contributes around 10% of the GWP. Finding sustainable paint alternatives can help to lower the GWP of the product. Within the manufacturing stage (A3), it is clear that the main driver of GWP is the natural gas at around 70%.



Additional Environmental Information

Environment and Health During Manufacturing CertainTeed has well-established Environmental, Health, and Safety (EHS) and product stewardship programs which help to enforce proper evaluation and monitoring of chemicals that are chosen to manufacture products. These programs ensure that all environmental and OSHA (Occupational Safety and Health Administration) requirements are met or exceeded to ensure the health and safety of all employees and contractors. Environment and Health During Installation All recommendations should be utilized as indicated by Safety Data Sheets and installation guidelines. This information can be downloaded at: https://www.certainteed.com/ Extraordinary Effects Fire ASTM E1264: Class A ASTM E84: Flame Spread of 25 or less / smoke developed of 50 or less Water This product is subject to water damage. No water or water vapor from sources including, but not limited to, condensation, leaking pipes and/or ducts, or live steam should come in contact with the ceiling panels. Mechanical Destruction This product is intended for commercial applications. Use and practice information can be found in “Acoustical Ceilings: Use and Practice” published by Ceilings & Interior Systems Construction Association (CISCA). This product should be installed in accordance with CertainTeed installation instruction.

Other Environmental Impacts

Impact Category	Indicator	Unit	A1A2A3	A4	A5	C1	C2	C3	C4
GWP-GHG	ND	kg CO2 eq	ND	ND	ND	ND	ND	ND	ND

Note:

Not all abbreviated indicators listed below may be present in the results above. The inclusion of indicators varies based on PCR requirements.

Abbreviations:

GWP-IOBC/GWP-GHG = Climate change indicator with instantanious oxidation of biogenic carbon. The GWP-IOBC indicator has zero contribution to GWP from biogenic carbon temporary stored in products and packaging. The GWP-IOBC indicator, also called GWP-GHG, is identical to GWP-total except that the characterization factor (CF) for biogenic CO2 is set to zero.

Modified Impact Results: Renewable Electricity

per 0.093 m2 of installed product .

Impact Category	Indicator	Unit	A1A2A3	A4	A5	C1	C2	C3	C4
GWP-total	ND	kg CO2 eq	6.26e-1	3.68e-2	2.08e-2	0	1.61e-3	0	8.21e-3
GWP-fossil	ND	kg CO2 eq	6.92e-1	3.68e-2	1.73e-2	0	1.61e-3	0	6.89e-3
ODP	ND	kg CFC 11 eq	3.04e-9	1.37e-12	1.72e-14	0	6.02e-14	0	1.52e-17
AP	ND	kg SO2 eq	3.55e-3	2.18e-4	7.80e-5	0	9.55e-6	0	3.21e-5
EP	ND	kg N eq	1.08e-3	1.21e-5	2.69e-5	0	5.29e-7	0	1.14e-5
POCP	ND	kg O3 eq	3.24e-2	6.01e-3	2.72e-4	0	2.63e-4	0	8.26e-5
ADP-fossil	ND	MJ	7.69e-1	6.43e-2	2.31e-3	0	2.81e-3	0	6.24e-4

Note:

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Abbreviations:

GWP = Global Warming Potential, 100 years (may also be denoted as GWP-total, GWP-fossil (fossil fuels), GWP-biogenic (biogenic sources), GWP-luluc (land use and land use change)), ODP = Ozone Depletion Potential, AP = Acidification Potential, EP = Eutrophication Potential, SFP = Smog Formation Potential, POCP = Photochemical oxidant creation potential, ADP-Fossil = Abiotic depletion potential for fossil resources, ADP-Minerals&Metals = Abiotic depletion potential for non-fossil resources, WDP = Water deprivation potential, PM = Particular Matter Emissions, IRP = Ionizing radiation, human health, ETP-fw = Eco-toxicity (freshwater), HTP-c = Human toxicity (cancer), HTP-nc = Human toxicity (non-cancer), SQP = Soil quality index.

Saint-Gobain is committed to achieving Carbon Neutrality by 2050. In January 2021, Saint-Gobain North America started receiving Renewable Energy Certificates (RECs) from a 12-year virtual power purchase agreement (vPPA) with the Blooming Grove Wind Farm in McLean County, Illinois. Each year within the agreement, the company receives and retires these RECs, effectively reducing CO2 equivalent emissions from electricity usage in the United States and Canada.

The updated results incorporate the impact of RECs on the electricity used in the manufacturing process (A3), as shown in Table 111 Table 112 and . The reduced impacts resulting from allocated RECs at Plymouth, WI were calculated using 100% wind-generated electricity, covering 50.33% of the plant’s electricity consumption between March 1, 2022, and February 28, 2023. The REC data was modeled using the ‘US-SERC Electricity production, wind, 1-3MW turbine, onshore’ dataset, with a carbon intensity of 13.5 kg CO2e/MWh*. Any remaining energy not covered by RECs was modeled based on local energy grid information for the manufacturing site(s).”
*GWP IPCC AR5 (excluding biogenic carbon)

Environmental Activities and Certifications

Certification

None

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- ASTM C636 - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustic Panel and Lay-in Panels
- ASTM E84 - Test Method for Surface Burning Characteristics of Building Materials

- ASTM E1110 - Standard Classification for Determination of Articulation Class
- ASTM E1111 - Standard Test Method for Measuring the Interzone Attenuation of Open Office Components
- ASTM E1264 - Standard Classification for Acoustical Ceiling Products
- ASTM E1414 - Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum
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