



Declaration Owner

TruStile Doors, LLC

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Product:

Door Leaf Products:

MDF Stile and Rail Doors
MDF Flush Doors
MDF Stile and Rail Doors with LVL
MDF Fire Doors

Functional/Declared Unit

The declared unit is one door leaf, measuring 21 ft² (1.95 m²) at a nominal 1-3/4 inch (44.45 mm) thickness.

EPD Number and Period of Validity

SCS-EPD-10661

EPD Valid July 27, 2026 through July 26, 2031

Product Category Rule

Product Category Rule for Environmental Product Declarations: *PCR for Interior Architectural Wood Door Leaves*. NSF International. Valid through November 2027.

Program Operator

SCS Global Services

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Declaration owner:	TruStile Doors, LLC
Address:	1111 East 71 st Ave, Denver, CO 80229, USA
Declaration Number:	SCS-EPD-10661
Date of Issue:	July 27, 2026
Declaration Validity Period:	July 27, 2026- July 26, 2031
Program Operator:	SCS Global Services, 2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA
Declaration URL Link:	https://www.scsglobalservices.com/certified-green-products-guide
General Program Instructions:	SCS Type III Environmental Declaration Program: Program Operator Manual. V12.0
Product(s):	Wood door leaves
Declared Unit or Functional Unit:	The declared unit is one door leaf, measuring 21 ft ² (1.95 m ²) at a nominal 1-3/4 inch (44.45 mm) thickness.
Product's Intended Application and Use:	Doors to be used in residential and/or commercial applications.
Product RSL (if applicable):	N/A
Markets of Applicability:	North America
EPD Type:	Product specific
EPD Scope:	Cradle to gate
Year(s) of Reported Manufacturer Primary Data:	2025
Data Quality Assessment Score:	Good
LCA Software & Version Number:	openLCA 2.6
LCI Database(s) & Version Number:	ecoinvent v3.12
LCIA Methodology & Version Number:	TRACI 2.1, CML IA-baseline, IPCC 2013
Reference PCR:	Product Category Rule for Environmental Product Declarations: PCR for Interior Architectural Wood Door Leaves. NSF International. Valid through November 2027
PCR review:	Dr. Thomas P. Gloria, PhD; Dr. Michael Overcash; Mr. Bill Stough
LCA Practitioner:	Urvi Talaty
Independent critical review of the LCA and data, according to ISO 14044 and the PCR:	☐ internal ☒ external
LCA Reviewer:	 Lindita Bushi, Ph.D., Athena Sustainable Materials Institute
Independent verification of the declaration and data, according to ISO 14025 and the PCR:	☐ internal ☒ external
EPD Verifier:	 Lindita Bushi, Ph.D., Athena Sustainable Materials Institute
Declaration Contents:	1. TruStile Doors, LLC 3 2. Product..... 3 3. Methodological Framework..... 6 4. LCA: Results..... 10 5. LCA: Interpretation..... 18 6. Additional Environmental Information..... 20 7. References..... 21
Disclaimers: An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication. Conformity: This EPD conforms to ISO 14025:2006, and ISO 21930:2017. Ownership: The EPD owner has the sole ownership, liability, and responsibility of the EPD. Accuracy of Results: Due to PCR constraints, this EPD provides estimations of potential impacts that are inherently limited in terms of accuracy. Comparability: The PCR this EPD was based on was not written to support comparative assertions. EPDs based on different PCRs, or different calculation models, may not be comparable. When attempting to compare EPDs or life cycle impacts of products from different companies, the user should be aware of the uncertainty in the final results, due to and not limited to, the practitioner's assumptions, the source of the data used in the study, and the specifics of the product modeled. In accordance with ISO 21930:2017, EPDs are comparable only if they comply with the core PCR, use the same sub-category PCR where applicable, include all relevant information modules and are based on equivalent scenarios with respect to the context of construction works. This EPD meets all comparability requirements stated in ISO 14025:2006. However, differences in certain assumptions, data quality, and variability between LCA data sets may still exist. As such, caution should be exercised when evaluating EPDs from different manufacturers or programs, as the EPD results may not be entirely comparable. Any EPD comparison must be carried out at the construction works level per ISO 21930:2017 guidelines. The results of this EPD reflect an average performance by the product and its actual impacts may vary on a case-to-case basis.	

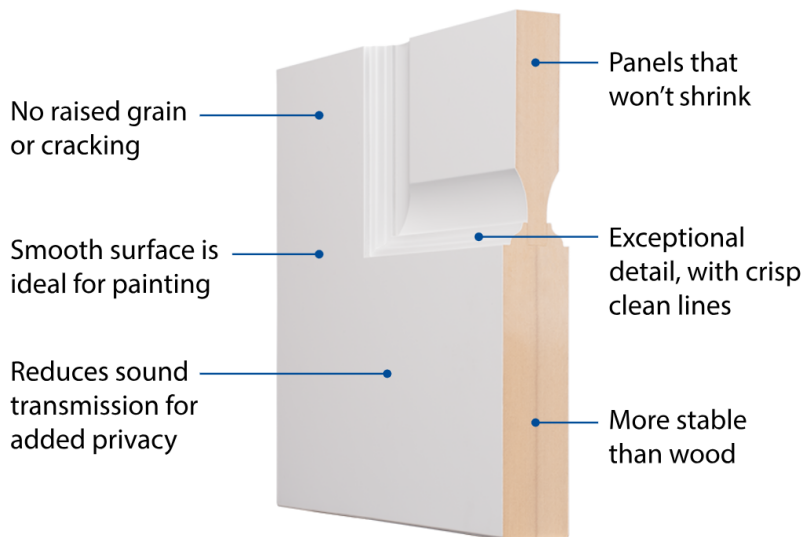
1. TruStile Doors, LLC

TruStile Doors, LLC was founded in 1995 in Denver, CO, on the principles of design flexibility and customizations, using the best materials for paint-grade doors (MDF), and offering short lead times for production. Since then, TruStile has been changing the door industry with every stile, rail and panel we put through our production line by blending modern technology with old world craftsmanship.

2. Product

2.1 PRODUCT DESCRIPTION

TruStile specializes in the use of medium density fiberboard (MDF) as a preferred material for painted door applications, realizing its many advantages over alternative materials like natural wood. MDF is an engineered wood product made from recycled and recovered wood fiber. The durable and homogenous construction of MDF resists warping, cracking and splitting and outperforms natural wood doors for painted applications. This EPD does not include the doorframe, hinges, or operating hardware.



- Made to order and built to any size and style.
- Built with genuine stile and rail construction — never routed or stamped.
- Made with solid, super-refined MDF that provides a smoother painting surface than pine, poplar or lower-grade MDF alternatives.
- Engineered for maximum stability and durability — won't shrink, expand or warp when exposed to environment.
- More affordable than wood doors.
- Third party certified by Scientific Certification Systems to contain 63% recycled content, making them ideal for Green building.

Every TruStile door is made to order, each built to the exact style and size you require. TruStile still builds its MDF doors using traditional stile and rail construction, a method usually reserved for wood doors. TruStile solid MDF doors are never routed or filled with cheap core materials. Instead, each door is constructed to provide superior, architecturally correct details and an unequalled finishing surface.

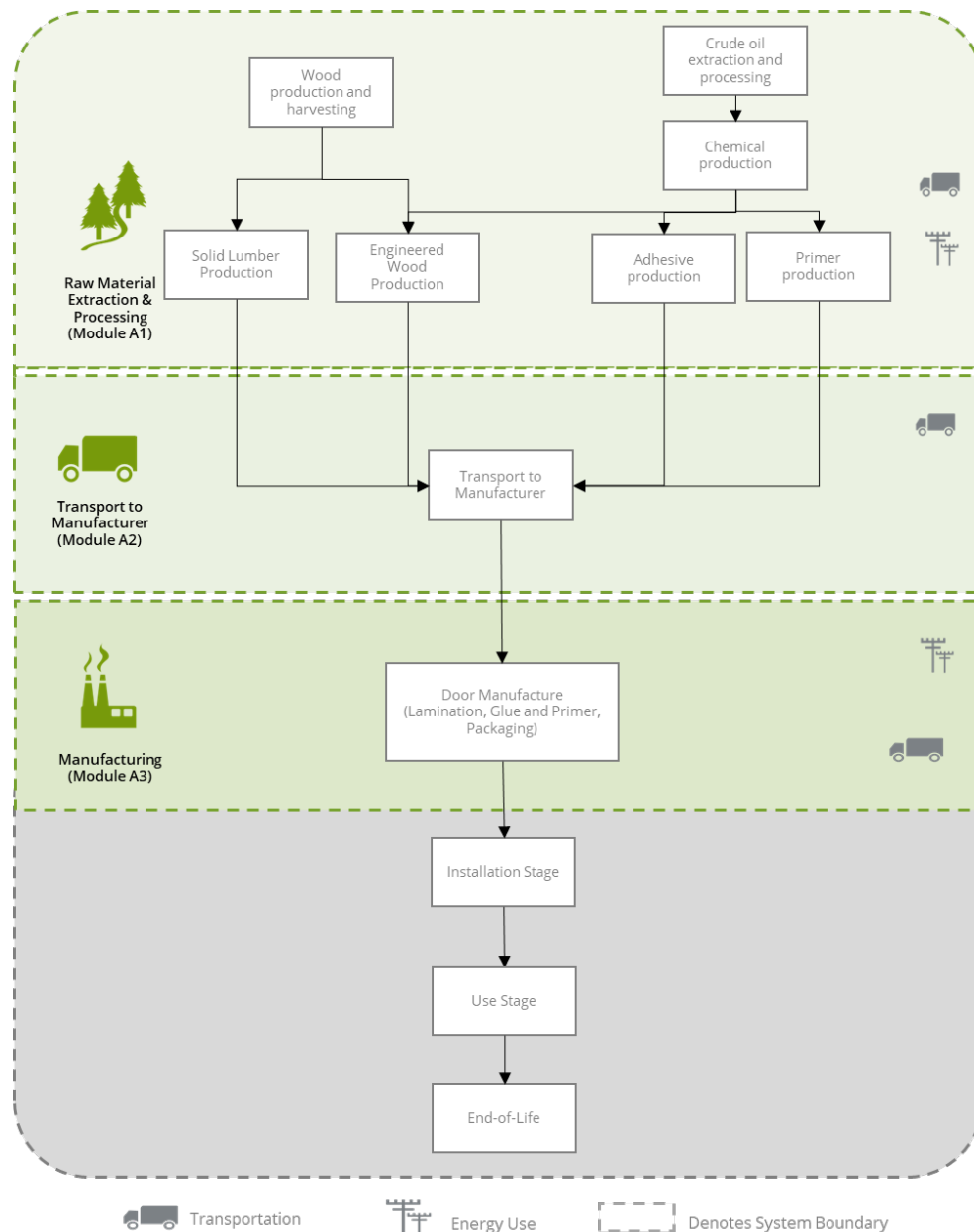
2.2 TECHNICAL SPECIFICATIONS

TruStile's MDF flush doors and rail and stile doors conform to material specific standards: ANSI/WDMA I.S. 1A Industry Standard for Interior Architectural Wood Flush Doors; ANSI/WDMA I.S. 6A Industry Standard for Interior Architectural Wood Stile and Rail Doors. Detailed product performance results can be found on the manufacturer's website (trustile.com).

Table 1. Product specifications for the TruStile doors.

Test	Specification
ANSI/WDMA I.S. 1A Doors	Industry Standard for Interior Architectural Wood Flush
ANSI/WDMA I.S. 6A	Industry Standard for Interior Architectural Wood Stile and Rail Doors

2.3 FLOW DIAGRAM



2.4 APPLICATION

TruStile serves a wide range of architectural and commercial applications including health care and hospitality, education, public spaces and government, military, office and mixed use/multi-family.

2.5 DECLARATION OF METHODOLOGICAL FRAMEWORK

The scope of the EPD is cradle-to-gate, including raw material extraction and processing; raw material transportation; and product manufacture.

Manufacturing resource use was allocated to the products based on mass. Impacts from transportation were allocated based on the mass of material and distance transported.

Processes contributing greater than 1% of the total environmental impact indicator for each impact are included in the inventory. No known flows were deliberately excluded from this EPD. No CO2 certificates are included in this LCA. No green power certificates are used in this EPD project.

2.6 MATERIAL COMPOSITION

Table 2. Material composition of all products in kilograms per declared unit and in percentage of total weight.

Material	Solid MDF Stile and Rail Doors		MDF Stile & Rail Doors with LVL Stile & Rails and Solid MDF Panels		MDF Flush Doors reinforced with LSL Core		MDF Fire-Rated Doors with Fire Core	
	kg	%	kg	%	kg	%	kg	%
Raw Material Inputs								
Medium Density Fiberboard (MDF)	47.5	95%	30.4	67%	21.9	45%	34.2	55%
Poplar Edge	0.695	1%	0.607	1%	0.436	1%	0.486	1%
Laminated Veneer Lumber (LVL)	0.00	0%	13.0	29%	0.00	0%	0.00	0%
Laminated Strand Lumber (LSL)	0.00	0%	0.00	0%	25.7	52%	0.00	0%
Wood Glue	0.641	1%	0.560	1%	0.402	1%	0.448	1%
Primer	1.04	2%	0.911	2%	0.655	1%	0.730	1%
Fire Core	0.00	0%	0.00	0%	0.00	0%	26.2	42%
TOTAL	49.9		45.5		49.0		62.1	
Packaging								
Pallet	4.15	94%	3.91	94%	2.60	94%	2.90	94%
Cardboard	0.167	4%	0.157	4%	0.105	4%	0.117	4%
Plastic Film	8.35x10 ⁻²	2%	7.86x10 ⁻²	2%	5.24x10 ⁻²	2%	5.84x10 ⁻²	2%
TOTAL	4.40		4.14		2.76		3.08	

2.7 TRANSPORTATION

Transportation for the LCA model is based on data from the component manufacturer (1st tier supplier) to the manufacturing facility. Transportation data for 2nd tier suppliers (material supplier to component manufacturer) are based on data embedded in the representative LCI datasets.

2.8 MANUFACTURE

The products are manufactured at the TruStile production facility in Denver, CO. The manufacturer provided primary data for their annual production, electricity consumption and waste generation at the manufacturing facility. Impacts were also included from their warehouse, where some raw materials are stored. Electricity consumption is modeled using Ecoinvent datasets for the relevant NERC regional electricity supply mix.

2.9 PACKAGING

Packaging for the products included in this study includes pallets, plastic film, and cardboard.

3. Methodological Framework

3.1 DECLARED/FUNCTIONAL UNIT

This LCA study is cradle-to-gate (i.e., raw material extraction through product manufacture). In accordance with the PCR, a declared unit is used in lieu of the functional unit as this LCA study does not cover the complete life cycle and thus the performance of the product (e.g., product lifetime) is not defined. The declared unit is 1.95 m² (21 ft²) of door leaf at a nominal 44.45 mm (1-3/4") thickness.

Table 3. Declared unit and reference flows.

Item	Unit	Solid MDF Stile and Rail Doors	MDF STILE Rail Doors with LVL Stile & Rails and Solid MDF Panels	MDF Flush Doors reinforced with LSL Core	MDF Fire-Rated Doors with Fire Core
Mass of door leaf	kg	50	45.5	49	62
Nominal size	mm	914*2134			
Thickness	mm	44.5			
Door area	m ²	1.95			
Ratio of standard door	N/A	1			

3.2 SYSTEM BOUNDARY

A cradle-to-gate life cycle assessment (LCA) was completed for this product in accordance with ISO 14040, ISO 14044, and the Product Category Rule for Environmental Product Declarations: *PCR for Interior Architectural Wood Door Leaves*. The table below illustrates the life cycle stages included in this EPD.

Table 4. Life cycle stages included in this EPD.

Product			Construction		Use							End-of-life				Benefits and loads beyond the system boundary
A1	A2	A3	A4	A5	B1	B1	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Raw material extraction and processing	Transport to manufacturer	Manufacturing	Transport	Construction - installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse, recovery and/or recycling potential
X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND

X = Module Included | MND = Module Not Declared

3.3 ALLOCATION

This study follows the allocation guidelines of ISO 14044 and allocation rules specified in the PCR and sought to minimize the use of allocation wherever possible. The PCR requires where allocation cannot be avoided that it be based on mass or biophysical relationships (e.g., volume, energy content, or mass-based relationships). In general, resource use at the facility was allocated to the product based on the product weight as a fraction of the total facility production.

Impacts from transportation were allocated based on the mass of material and distance transported. For materials with recycled content, the Recycled Content Method was followed, whereby only the impacts from reprocessing the recycled material is included (impacts from a previous life cycle are not). No burdens are allocated across the system boundary with secondary material, secondary fuel or recovered energy flows arising from waste.

3.4 CUT-OFF RULES

According to the PCR, mass and energy flows that consist of less than 1% may be omitted from the inventory analysis. Cumulative omitted mass or energy flows shall not exceed 5%. In the present study, except as noted, all known materials and processes were included in the life cycle inventory.

3.5 DATA SOURCES

Unit processes were developed with openLCA 2.6 software, drawing upon data from multiple sources. Primary data was provided by TruStile for their products and manufacturing facility. Secondary LCI data from Ecoinventv3.12 and industry sources were used.

Table 5. LCI datasets and associated databases used to model material production and processing.

Flow	Dataset	Data Source(s)	Publication Date
Materials			
Medium density fiberboard (MDF)	Environmental Product Declaration - North American Medium Density Fiberboard ¹	EPD	2024
Laminated veneer lumber (LVL)	Environmental Product Declaration - U.S. Laminated Veneer Lumber ²	EPD	2025
Laminated strand lumber (LSL)	Life Cycle Assessment of North American Laminated Strand Lumber (LSL) Production ³	LCI Data	2021
Poplar edge	market for sawnwood, board, hardwood, dried (u=10%), planed sawnwood, board, hardwood, dried (u=10%), planed Cutoff, U - RoW	Ecoinvent v3.12	2025
Fire core (modeled using safety data sheet)	market for ammonia, anhydrous, liquid ammonia, anhydrous, liquid Cutoff, U - RoW	Ecoinvent v3.12	2025
	market for ammonium chloride ammonium chloride Cutoff, U - GLO	Ecoinvent v3.12	2025
	market for fibreboard, hard fibreboard, hard Cutoff, U - RoW	Ecoinvent v3.12	2025
	formaldehyde production, methanol oxidation formaldehyde Cutoff, U - RoW	Ecoinvent v3.12	2025
	glass fibre production glass fibre Cutoff, U - RoW	Ecoinvent v3.12	2025
Primer (modeled using safety data sheet)	market for calcium carbonate, precipitated calcium carbonate, precipitated Cutoff, U - RoW	Ecoinvent v3.12	2025
	market for chemical, organic, alcohols chemical, organic, alcohols Cutoff, U - GLO	Ecoinvent v3.12	2025
	market for kaolin kaolin Cutoff, U - GLO	Ecoinvent v3.12	2025
	market for malusil malusil Cutoff, U - GLO	Ecoinvent v3.12	2025
	market for paraffin paraffin Cutoff, U - GLO	Ecoinvent v3.12	2025
	market for silica sand silica sand Cutoff, U - GLO	Ecoinvent v3.12	2025
	market for titanium dioxide titanium dioxide Cutoff, U - RoW	Ecoinvent v3.12	2025
	market for water, deionised water, deionised Cutoff, U - RoW	Ecoinvent v3.12	2025
Adhesive	market for vinyl acetate vinyl acetate Cutoff, U - RoW	Ecoinvent v3.12	2025
Utilities			

¹ EPD - North American Medium Density Fiberboard (2024). Composite Panel Association. <https://www.compositepanel.org/wp-content/uploads/MDF-EPD-Final-4-24-24.pdf>

² EPD - U.S. Laminated Veneer Lumber (2025). American Wood Council. <https://web-media.awc.org/wp-content/uploads/2021/12/11163423/LVL-EPD-2025.pdf>

³ Khatri et al. (2021). Life cycle assessment of North American laminated strand lumber (LSL) production. Recent Progress in Materials 3(4). <https://corrim.org/wp-content/uploads/2022/08/LCA-Laminated-Strand-Lumber-NA.pdf>

Flow	Dataset	Data Source(s)	Publication Date
Electricity	market for electricity, medium voltage electricity, medium voltage Cutoff, U - modified RMPA - US-WECC	Ecoinvent v3.12	2025
Natural gas	market for heat, district or industrial, natural gas heat, district or industrial, natural gas Cutoff, U - RoW	Ecoinvent v3.12	2025
Biomass	heat production, wood chips from industry, at furnace 50kW, state-of-the-art 2014 heat, central or small-scale, other than natural gas Cutoff, U - RoW	Ecoinvent v3.12	2025
Light fuel oil	heat production, light fuel oil, at industrial furnace 1MW heat, district or industrial, other than natural gas Cutoff, U - RoW	Ecoinvent v3.12	2025
Propane	market for propane, burned in building machine propane, burned in building machine Cutoff, U - GLO	Ecoinvent v3.12	2025
Water	market for tap water tap water Cutoff, U - RoW	Ecoinvent v3.12	2025
Waste			
Landfill - Municipal solid waste	treatment of municipal solid waste, sanitary landfill municipal solid waste Cutoff, U - RoW	Ecoinvent v3.12	2025
Landfill - Wood waste	treatment of waste wood, untreated, sanitary landfill waste wood, untreated Cutoff, U - RoW	Ecoinvent v3.12	2025
Wastewater	market for wastewater, average wastewater, average Cutoff, U - RoW	Ecoinvent v3.12	2025
Packaging			
Wood (pallet)	market for EUR-flat pallet EUR-flat pallet Cutoff, U - RoW	Ecoinvent v3.12	2025
Plastic	market for packaging film, low density polyethylene packaging film, low density polyethylene Cutoff, U - GLO	Ecoinvent v3.12	2025
Cardboard	market for corrugated board box corrugated board box Cutoff, U - US	Ecoinvent v3.12	2025
Transportation			
Truck	market for transport, freight, lorry, 16-32 metric ton, diesel, EURO 4 transport, freight, lorry, 16-32 metric ton, diesel, EURO 4 Cutoff, U - RoW	Ecoinvent v3.12	2025
Rail	market for transport, freight, train, fleet average transport, freight, train, fleet average Cutoff, U - US	Ecoinvent v3.12	2025

3.6. DATA QUALITY

The data quality assessment addressed the following parameters: time-related coverage, geographical coverage, technological coverage, precision, completeness, representativeness, consistency, reproducibility, sources of data, and uncertainty.

Table 6. *Data quality parameters.*

Data Quality Parameter	Data Quality Discussion
Time-Related Coverage: Age of data and the minimum length of time over which data is collected	The most recent available data are used, based on other considerations such as data quality and similarity to the actual operations. Typically, these data are less than 5 years old (typically 2025). All of the data used represented an average of at least one year's worth of data collection, and up to three years in some cases. Manufacturer-supplied data (primary data) are based on annualized production for 2025.
Geographical Coverage: Geographical area from which data for unit processes is collected to satisfy the goal of the study	The data used in the analysis provide the best possible representation available with current data. As applicable, actual processes for upstream operation are North American. Surrogate data used in the assessment are representative of North American operations.
Technology Coverage: Specific technology or technology mix	For the most part, data are representative of the actual technologies used for processing, transportation, and manufacturing operations. Representative fabrication datasets, specific to the type of material, are used to represent the actual processes, as appropriate.
Precision: Measure of the variability of the data values for each data expressed	Precision of results are not quantified due to a lack of data. Data collected for operations were typically averaged for one or more years and over multiple operations, which is expected to reduce the variability of results.
Completeness: Percentage of flow that is measured or estimated	The LCA model included all known mass and energy flows for production of the MDF door leaf products. In some instances, surrogate data used to represent upstream and downstream operations may be missing some data which is propagated in the model. No

Data Quality Parameter	Data Quality Discussion
	known processes or activities contributing to more than 1% of the total environmental impact for each indicator are excluded.
Representativeness: Qualitative assessment of the degree to which the data set reflects the true population of interest	Data used in the assessment represent typical or average processes as currently reported from multiple data sources and are therefore generally representative of the range of actual processes and technologies for production of these materials. Considerable deviation may exist among actual processes on a site-specific basis; however, such a determination would require detailed data collection throughout the supply chain back to resource extraction.
Consistency: Qualitative assessment of whether the study methodology is applied uniformly to the various components of the analysis	The consistency of the assessment is considered to be high. Data sources of similar quality and age are used; with a bias towards Ecoinvent v3.12 data where available. Different portions of the product life cycle are equally considered; however, it must be noted that final disposition of the product packaging is based on assumptions of current average practices in the United States.
Reproducibility: Qualitative assessment of the extent to which information about the methodology and data values would allow an independent practitioner to reproduce the results reported in the study	Based on the description of data and assumptions used, this assessment would be reproducible by other practitioners. All assumptions, models, and data sources are documented.
Sources of the Data: Description of all primary and secondary data sources	Data representing energy use at the TruStile manufacturing facility represent an annual average and are considered of high quality due to the length of time over which these data are collected, as compared to a snapshot that may not accurately reflect fluctuations in production. For secondary LCI data, representative EPDs, LCA and the Ecoinvent LCI databases are used.
Uncertainty of the Information: Uncertainty related to data, models, and assumptions	Uncertainty related to materials in the TruStile products and packaging is low. Primary data for some upstream processes were available in the form of EPDs; where not available, the study relied upon use of existing representative datasets for these cases. These representative datasets contained relatively recent data (~10 years, or more recent), but in some instances lacked geographical representativeness. Uncertainty related to the impact assessment methods used in the study are relatively high. The impact assessment method includes impact potentials that lack characterization of providing and receiving environments or tipping points.

3.7 PERIOD UNDER REVIEW

Manufacturer-supplied data (primary data) are based on annual production for calendar year 2025.

3.8 COMPARABILITY AND BENCHMARKING

The PCR this EPD was based on was not written to support comparative assertions. EPDs based on different PCRs, or different calculation models, may not be comparable. When attempting to compare EPDs or life cycle impacts of products from different companies, the user should be aware of the uncertainty in the final results, due to and not limited to, the practitioner's assumptions, the source of the data used in the study, and the specifics of the product modeled.

3.9 ESTIMATES AND ASSUMPTIONS

The assessment relied on a number of assumptions related to material composition, transport, and processing. The major assumptions used in the assessment are described below.

- The TruStile production facility is located in the eGRID EPA NERC subregion RMPA. Ecoinvent inventory datasets, modified to reflect the eGRID energy mixes for the NERC subregion RMPA, were used to estimate resource use and emissions from electricity use at the manufacturing facility.
- Electricity and resource use (natural gas, light fuel oil, etc.) at the manufacturing facility were allocated to the MDF doors based on product mass, utilizing 12 months of production data for calendar year 2025 provided by the manufacturer.

- Although the MDF doors considered in the study scope are constructed of a variety of components and materials, the manufacturing processes were assumed to be equivalent, on a mass basis, for all door types across the production facility for allocating electricity and resource use to each door modeled. Electricity and resource use at the TruStile manufacturing facility and warehouse were allocated to the MDF door products based on total facility annual production.
- Disposal of unused scrap and product packaging is modeled based on primary data from TruStile. For final disposal of materials at the manufacturing facilities, all materials disposed of off-site are assumed to be transported ~32 km (20 miles) by diesel truck to either a landfill, or material reclamation facility (for recycling), based on the EPA WARM model.⁴ Datasets representing disposal in a landfill and waste incineration are from Ecoinvent.

4. LCA: Results

Results of the Life Cycle Assessment are presented below. It is noted that LCA results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks.

The following environmental impact category indicators are reported using characterization factors based on TRACI 2.1, CML baseline, and IPCC 2013. Results reported in MJ are calculated using lower heating values. All values are rounded to three significant digits.

Table 7. *Impact categories used in this study.*

Impact Category		Unit
Global Warming Potential of GHGs over 100 years (GWP)	IPCC 2013	kg CO ₂ eq. (AR5)
Ozone Layer Depletion (ODP Steady State) (ODP)	TRACI 2.1	kg CFC-11 eq.
Photochemical Oxidant Creation Potential (POCP)	TRACI 2.1	kg O ₃ eq.
Acidification (AP)	TRACI 2.1	kg SO ₂ eq.
Eutrophication (EP)	TRACI 2.1	kg N eq.
Fossil Fuel Depletion	TRACI 2.1	MJ surplus
Abiotic Depletion, fossil fuels (ADPF)	CML-IA	MJ

These impact categories are globally deemed mature 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. The following inventory parameters, specified by the PCR, are also reported.

⁴ "WARM Model Transportation Research - Draft." Memorandum from ICF Consulting to United States Environmental Protection Agency. September 7, 2004.

Table 8. *Additional transparency parameters*

Resources	Unit	Waste and Outflows	Unit
RPR _E : Renewable primary resources used as energy carrier (fuel)	MJ, LHV	HWD: Hazardous waste disposed	kg
RPR _M : Renewable primary resources with energy content used as material	MJ, LHV	NHWD: Non-hazardous waste disposed	kg
NRPR _E : Non-renewable primary resources used as an energy carrier (fuel)	MJ, LHV	RWD: High level radioactive waste	kg
NRPR _M : Non-renewable primary resources with energy content used as material	MJ, LHV	LRWD: Intermediate and low level radioactive waste	kg
SM: Secondary materials	kg	CRU: Components for re-use	kg
RSF: Renewable secondary fuels	MJ, LHV	MR: Materials for recycling	kg
NRSF: Non-renewable secondary fuels	MJ, LHV	MER: Materials for energy recovery	kg
RE: Recovered energy	MJ, LHV	EE: Recovered energy exported from the product system	MJ, LHV
FW: Use of new freshwater resources	m ³		
Carbon Emissions and Removals	Unit	Carbon Emissions and Removals	Unit
BCRP: Biogenic carbon removal from product	kg CO ₂	CCE: Calcination carbon emissions	kg CO ₂
BCEP: Biogenic carbon emission from product	kg CO ₂	CCR: Calcination carbon removals	kg CO ₂
BCRK: Biogenic carbon removal from packaging	kg CO ₂	BCEW: Biogenic carbon emission from combustion of waste from renewable sources used in production process	kg CO ₂
BCEK: Biogenic carbon emission from packaging	kg CO ₂	CWNR: Biogenic carbon emission from combustion of waste from non-renewable sources used in production processes	kg CO ₂

Note: for biogenic carbon, 50% C-content is assumed, multiplied by 44/12

All LCA results are stated to three significant figures in agreement with the PCR for this product and therefore the sum of the total values may not exactly equal 100%.

Table 9. Life Cycle Impact Assessment results for Solid MDF Stile and Rail Doors, per declared unit. Results reported in MJ are calculated using lower heating values.

Parameter	Unit	A1	A2	A3	A1-A3 Total
IPCC 2013					
GWP	kg CO ₂ eq	37.8	7.32	18.2	63.4
TRACI 2.1					
ODP	kg CFC-11 eq	1.51x10 ⁻⁶	9.06x10 ⁻⁸	1.65x10 ⁻⁷	1.77x10 ⁻⁶
AP	kg SO ₂ eq	0.282	6.29x10 ⁻²	4.36x10 ⁻²	0.389
EP	kg N eq	0.124	1.31x10 ⁻²	0.498	0.635
SFP	kg O ₃ eq	4.65	1.92	0.888	7.46
FFD	MJ surplus	76.2	11.9	19.4	108
CML-IA					
ADP-fossil	MJ	606	88.9	190	884

Table 10. Resource use results per declared unit for Solid MDF Stile and Rail Doors. All values are rounded to three significant digits. Results reported in MJ are calculated using lower heating values.

Parameter	A1	A2	A3	Total
Resources				
RPRM (MJ)	1,140	0.00	75.6	1,220
RPRE (MJ)	285	2.56	98.0	385
NRPRM (MJ)	182	0.00	4.00	186
NRPRE (MJ)	670	90.9	189	950
SM (kg)	35.9	0.00	0.00	35.9
RSF (MJ)	0.00	0.00	28.2	28.2
NRSF (MJ)	0.00	0.00	0.00	0.00
RE (MJ)	0.00	0.00	0.00	0.00
FW (m³)	0.241	1.47x10 ⁻²	7.22x10 ⁻²	0.328
Wastes				
HWD (kg)	0.00	0.00	0.00	0.00
NHWD (kg)	3.42	0.00	14.2	17.7
HLRW (kg)	1.77x10 ⁻⁷	0.00	0.00	1.77x10 ⁻⁷
ILLRW (kg)	3.08x10 ⁻⁷	0.00	0.00	3.08x10 ⁻⁷
CRU (kg)	0.00	0.00	0.00	0.00
MFR (kg)	0.00	0.00	8.03	8.03
MER (kg)	0.00	0.00	5.22	5.22
EE (MJ)	0.00	0.00	0.00	0.00

Significant data limitations currently exist within the LCI data used to generate waste metrics for Life Cycle Assessments and Environmental Product Declarations. The waste metrics were calculated in a way conformant with the requirements of ISO 21930:2017, but these values represent rough estimates and are for informational purposes only. As such, no decisions regarding actual cradle-gate waste performance between products should be derived from these reported values.

Table 11. Carbon emissions and removals indicator results for Solid MDF Stile and Rail Doors. All values are rounded to three significant digits. Results are per declared unit.

Parameter	A1	A2	A3	Total
BCRP (kg CO ₂)	-86.0	0.00	0.00	-86.0
BCEP (kg CO ₂)	86.0	0.00	0.00	86.0
BCRK (kg CO ₂)	0.00	0.00	-8.53	-8.53
BCEK (kg CO ₂)	0.00	0.00	8.53	8.53
CCE (kg CO ₂)	0.00	0.00	0.00	0.00
CCR (kg CO ₂)	0.00	0.00	0.00	0.00
BCEW (kg CO ₂)	0.00	0.00	14.5	14.5
CWNR (kg CO ₂)	0.00	0.00	0.00	0.00

Table 12. Life Cycle Impact Assessment results for the MDF Stile and Rail Doors with LVL Stiles & Rails and Solid MDF Panels, per declared unit. Results reported in MJ are calculated using lower heating values.

Parameter	Unit	A1	A2	A3	A1-A3 Total
IPCC 2013					
GWP	kg CO ₂ eq	40.0	9.61	16.5	66.1
TRACI 2.1					
ODP	kg CFC-11 eq	2.98x10 ⁻⁶	1.37x10 ⁻⁷	1.48x10 ⁻⁷	3.27x10 ⁻⁶
AP	kg SO ₂ eq	0.251	5.31x10 ⁻²	3.93x10 ⁻²	0.344
EP	kg N eq	0.130	1.59x10 ⁻²	0.453	0.599
SFP	kg O ₃ eq	4.64	1.49	0.801	6.93
FFD	MJ surplus	81.0	17.1	17.5	116
CML-IA					
ADP-fossil	MJ	622	126	172	919

Table 13. Resource use results per declared unit for MDF Stile and Rail Doors with LVL Stiles & Rails and Solid MDF Panels. All values are rounded to three significant digits. Results reported in MJ are calculated using lower heating values.

Parameter	A1	A2	A3	Total
Resources				
RPRM (MJ)	1,020	0.00	61.3	1,080
RPRE (MJ)	284	2.39	92.1	379
NRPRM (MJ)	134	0.00	3.24	137
NRPRE (MJ)	557	128	172	856
SM (kg)	31.5	0.00	0.00	31.5
RSF (MJ)	0.00	0.00	25.7	25.7
NRSF (MJ)	0.00	0.00	0.00	0.00
RE (MJ)	0.00	0.00	0.00	0.00
FW (m ³)	0.202	1.85x10 ⁻²	6.49x10 ⁻²	0.285
Wastes				
HWD (kg)	4.62x10 ⁻⁴	0.00	0.00	4.62x10 ⁻⁴
NHWD (kg)	2.65	0.00	13.0	15.6
HLRW (kg)	1.24x10 ⁻⁷	0.00	0.00	1.24x10 ⁻⁷
ILLRW (kg)	2.98x10 ⁻⁷	0.00	0.00	2.98x10 ⁻⁷
CRU (kg)	0.00	0.00	0.00	0.00
MFR (kg)	0.00	0.00	7.32	7.32
MER (kg)	0.00	0.00	4.76	4.76
EE (MJ)	0.00	0.00	0.00	0.00

Table 14. Carbon emissions and removals indicator results for MDF Stile and Rail Doors with LVL Stiles & Rails and Solid MDF Panels. All values are rounded to three significant digits. Results are per declared unit.

Parameter	A1	A2	A3	Total
BCRP (kg CO ₂)	-80.0	0.00	0.00	-80.0
BCEP (kg CO ₂)	80.0	0.00	0.00	80.0
BCRK (kg CO ₂)	0.00	0.00	-6.91	-6.91
BCEK (kg CO ₂)	0.00	0.00	6.91	6.91
CCE (kg CO ₂)	0.00	0.00	0.00	0.00
CCR (kg CO ₂)	0.00	0.00	0.00	0.00
BCEW (kg CO ₂)	0.00	0.00	13.4	13.4
CWNR (kg CO ₂)	0.00	0.00	0.00	0.00

Table 15. Life Cycle Impact Assessment results for MDF Flush Doors reinforced with LSL Core, per declared unit. Results reported in MJ are calculated using lower heating values.

Parameter	Unit	A1	A2	A3	A1-A3 Total
IPCC 2013					
GWP	kg CO2 eq	39.2	8.32	17.1	64.6
TRACI 2.1					
ODP	kg CFC-11 eq	1.05x10 ⁻⁶	1.08x10 ⁻⁷	1.46x10 ⁻⁷	1.30x10 ⁻⁶
AP	kg SO2 eq	0.252	6.39x10 ⁻²	3.87x10 ⁻²	0.354
EP	kg N eq	0.232	1.46x10 ⁻²	0.480	0.726
SFP	kg O3 eq	4.98	1.91	0.791	7.68
FFD	MJ surplus	71.7	13.9	17.7	103
CML-IA					
ADP-fossil	MJ	582	103	175	860

Table 16. Resource use results per declared unit for MDF Flush Doors reinforced with LSL Core. All values are rounded to three significant digits. Results reported in MJ are calculated using lower heating values.

Parameter	A1	A2	A3	Total
Resources				
RPRM (MJ)	525	0.00	47.5	573
RPRE (MJ)	1,480	2.66	77.5	1,560
NRPRM (MJ)	83.7	0.00	2.51	86.2
NRPRE (MJ)	651	105	175	932
SM (kg)	0.00	0.00	0.00	0.00
RSF (MJ)	0.00	0.00	27.7	27.7
NRSF (MJ)	0.00	0.00	0.00	0.00
RE (MJ)	0.00	0.00	0.00	0.00
FW (m ³)	0.277	1.65x10 ⁻²	6.29x10 ⁻²	0.357
Wastes				
HWD (kg)	0.00	0.00	0.00	0.00
NHWD (kg)	1.58	0.00	14.0	15.6
HLRW (kg)	8.18x10 ⁻⁸	0.00	0.00	8.18x10 ⁻⁸
ILLRW (kg)	3.08x10 ⁻⁷	0.00	0.00	3.08x10 ⁻⁷
CRU (kg)	0.00	0.00	0.00	0.00
MFR (kg)	0.00	0.00	7.89	7.89
MER (kg)	0.00	0.00	5.13	5.13
EE (MJ)	0.00	0.00	0.00	0.00

Table 17. Carbon emissions and removals indicator results for MDF Flush Doors reinforced with LSL Core. All values are rounded to three significant digits. Results are per declared unit.

Parameter	A1	A2	A3	Total
BCRP (kg CO ₂)	-88.4	0.00	0.00	-88.4
BCEP (kg CO ₂)	88.4	0.00	0.00	88.4
BCRK (kg CO ₂)	0.00	0.00	-5.35	-5.35
BCEK (kg CO ₂)	0.00	0.00	5.35	5.35
CCE (kg CO ₂)	0.00	0.00	0.00	0.00
CCR (kg CO ₂)	0.00	0.00	0.00	0.00
BCEW (kg CO ₂)	0.00	0.00	14.2	14.2
CWNR (kg CO ₂)	0.00	0.00	0.00	0.00

Table 18. Life Cycle Impact Assessment results for MDF Fire-Rated Doors with Fire Core, per declared unit. Results reported in MJ are calculated using lower heating values.

Parameter	Unit	A1	A2	A3	A1-A3 Total
IPCC 2013					
GWP	kg CO ₂ eq	86.3	5.51	21.0	113
TRACI 2.1					
ODP	kg CFC-11 eq	2.89x10 ⁻⁶	6.88x10 ⁻⁸	1.75x10 ⁻⁷	3.13x10 ⁻⁶
AP	kg SO ₂ eq	0.582	4.63x10 ⁻²	4.72x10 ⁻²	0.676
EP	kg N eq	0.343	9.84x10 ⁻³	0.601	0.954
SFP	kg O ₃ eq	8.99	1.41	0.968	11.4
FFD	MJ surplus	113	9.01	21.3	143
CML-IA					
ADP-fossil	MJ	1,080	67.2	212	1,360

Table 19. Resource use results per declared unit for MDF Fire-Rated Doors with Fire Core. All values are rounded to three significant digits. Results reported in MJ are calculated using lower heating values.

Parameter	A1	A2	A3	Total
Resources				
RPRM (MJ)	822	0.00	52.9	874
RPRE (MJ)	837	1.89	92.4	931
NRPRM (MJ)	131	0.00	2.80	134
NRPRE (MJ)	1,180	68.8	213	1,460
SM (kg)	0.00	0.00	0.00	0.00
RSF (MJ)	0.00	0.00	35.0	35.0
NRSF (MJ)	0.00	0.00	0.00	0.00
RE (MJ)	0.00	0.00	0.00	0.00
FW (m ³)	0.507	1.10x10 ⁻²	7.69x10 ⁻²	0.595
Wastes				
HWD (kg)	0.00	0.00	0.00	0.00
NHWD (kg)	2.46	0.00	17.6	20.1
HLRW (kg)	1.28x10 ⁻⁷	0.00	0.00	1.28x10 ⁻⁷
ILLRW (kg)	2.22x10 ⁻⁷	0.00	0.00	2.22x10 ⁻⁷
CRU (kg)	0.00	0.00	0.00	0.00
MFR (kg)	0.00	0.00	9.99	9.99
MER (kg)	0.00	0.00	6.49	6.49
EE (MJ)	0.00	0.00	0.00	0.00

Table 20. Carbon emissions and removals indicator results for MDF Fire-Rated Doors with Fire Core. All values are rounded to three significant digits. Results are per declared unit.

Parameter	A1	A2	A3	Total
BCRP (kg CO ₂)	-109	0.00	0.00	-109
BCEP (kg CO ₂)	109	0.00	0.00	109
BCRK (kg CO ₂)	0.00	0.00	-5.96	-5.96
BCEK (kg CO ₂)	0.00	0.00	5.96	5.96
CCE (kg CO ₂)	0.00	0.00	0.00	0.00
CCR (kg CO ₂)	0.00	0.00	0.00	0.00
BCEW (kg CO ₂)	0.00	0.00	18.0	18.0
CWNR (kg CO ₂)	0.00	0.00	0.00	0.00

5. LCA: Interpretation

The interpretation phase conforms to ISO 14044. The interpretation included the use of evaluation and sensitivity checks to steer the iterative process during the assessment, and a final evaluation including completeness, sensitivity, and consistency checks, at the end of the study.

Results were summarized by life cycle phase for a cradle-to-gate assessment of the TruStile door products. The total impact indicator results are dominated by the raw materials module (A1), followed by the transport module (A2), and manufacturing module (A3).

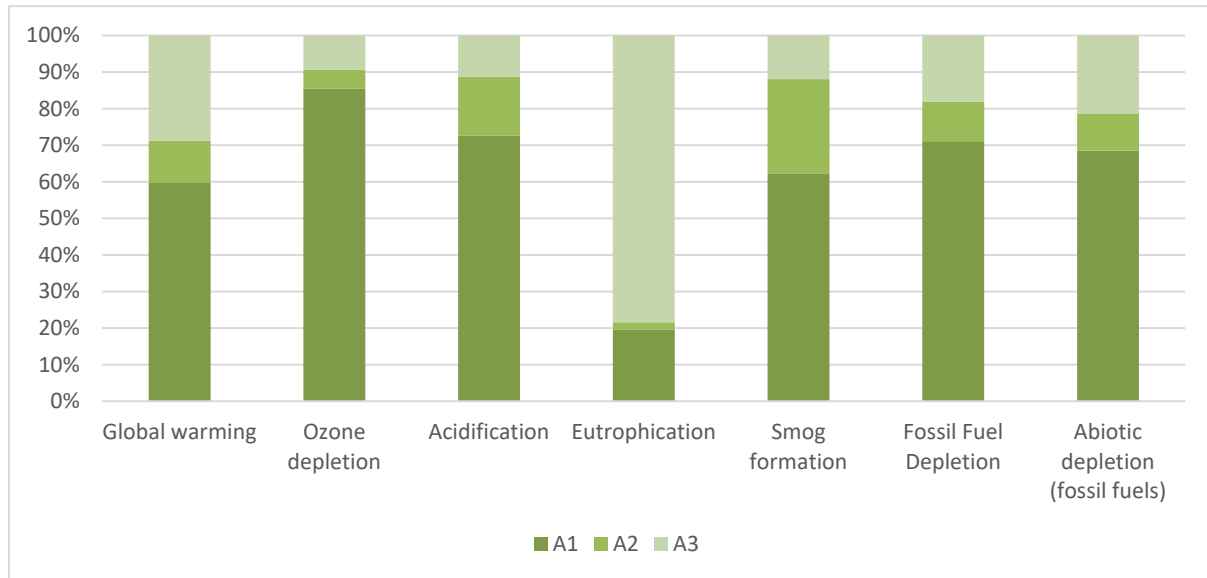


Figure 1. Contribution analysis by life cycle module for the Solid MDF Stile and Rail Doors.

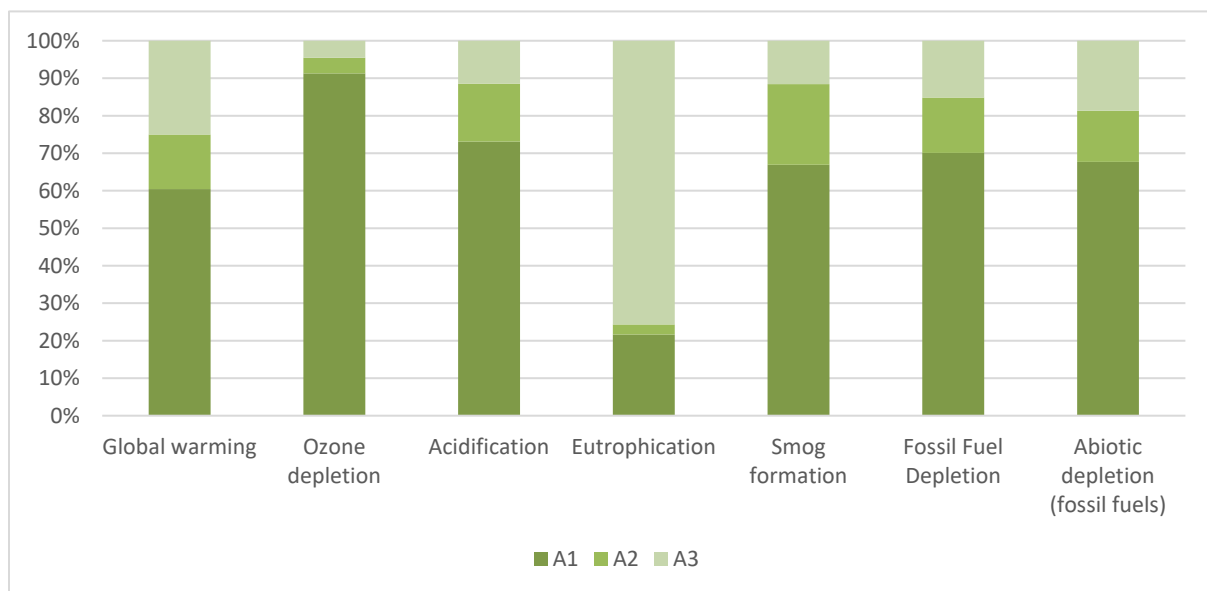


Figure 2. Contribution analysis by life cycle module for the MDF Stile and Rail Doors with LVL Stiles & Rails and Solid MDF Panels.

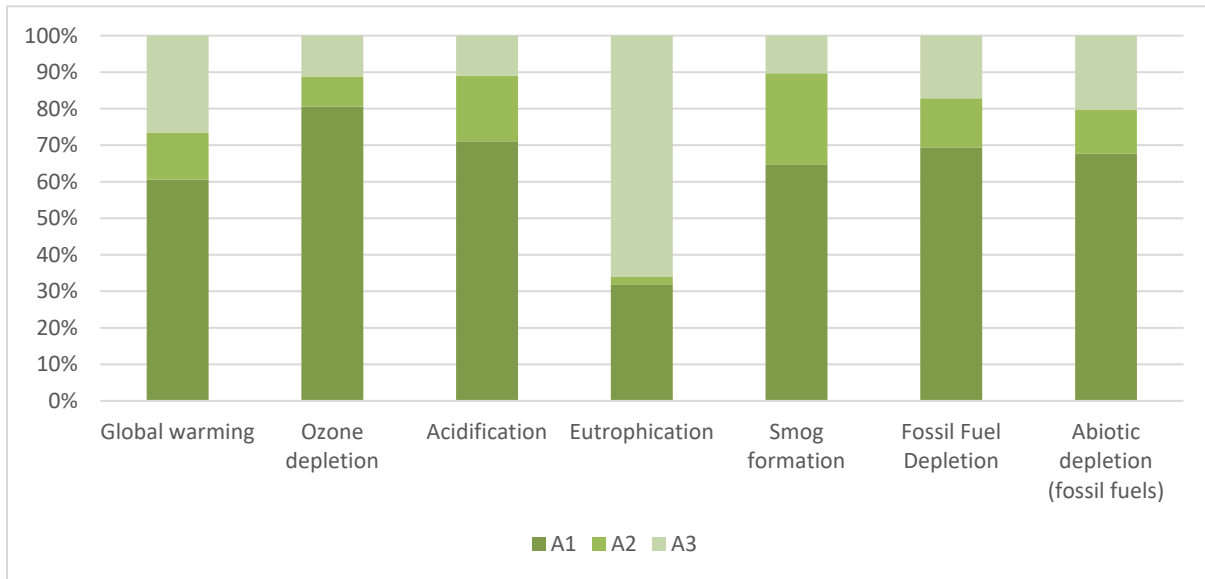


Figure 3. Contribution analysis by life cycle module for the MDF Flush Doors reinforced with LSL Core.

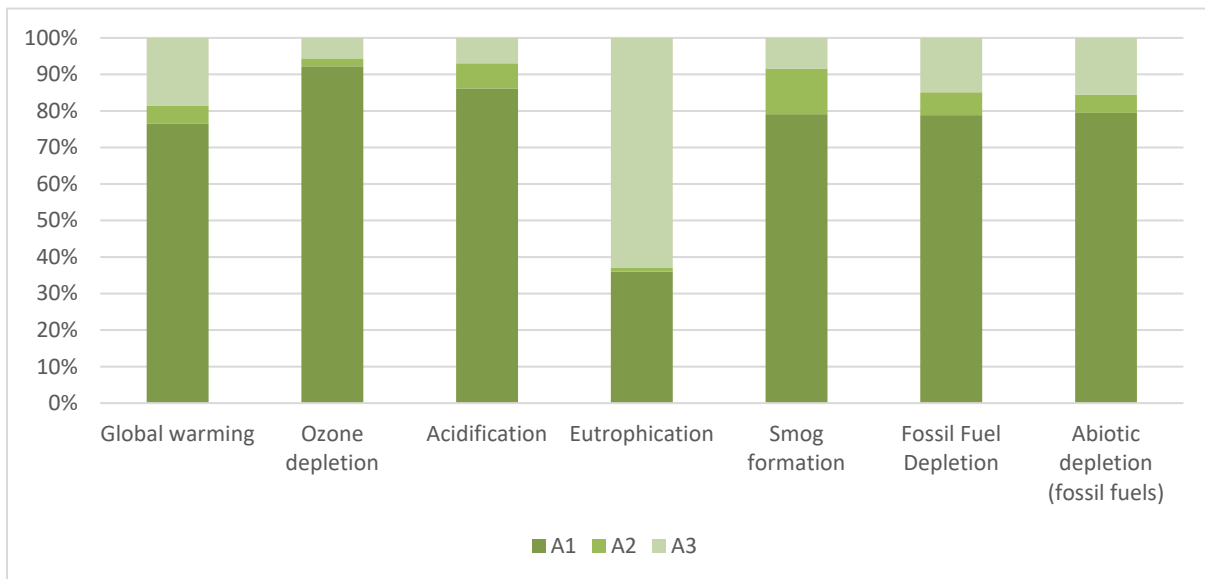


Figure 4. Contribution analysis by life cycle module for the MDF Fire-Rated Doors with Fire Core.

6. Additional Environmental Information

6.1 ENVIRONMENTAL ACTIVITIES AND CERTIFICATIONS

TruStile MDF doors have been SCS Certified (SCS-RC-01190) to contain a minimum of 63% Pre-Consumer Recycled Wood Content — qualifying them to contribute to LEED® credits under the Materials and Resources category on Green Building projects.

The standard MDF used in the construction of TruStile interior MDF doors is already low emitting and meets CARB (California Air Resources Board) and ANSI (American National Standards Institute) standards for formaldehyde emissions. Some homeowners and building professionals demand no-added formaldehyde products. TruStile answers this demand with a no-added formaldehyde MDF option that contains no urea-formaldehyde resin.

All TruStile doors are built using low VOC glues that contain less than 5g/L VOCs. Prior to shipment, TruStile MDF doors receive a water-based prime with a VOC content of less than 17g/L. MDF Doors can be specified with no primer when ordering.



6.2 FURTHER INFORMATION

Further information can be found at www.trustile.com

7. References

1. Life Cycle Assessment Architectural Medium Density Fiberboard (MDF) Doors. SCS Global Services Report, prepared for TruStile. July 2026.
2. ISO 14025:2006 Environmental labels and declarations – Type III environmental declarations – Principles and Procedures.
3. ISO 14040: 2006/AMD 1:2020 Environmental Management – Life cycle assessment – Principles and Framework
4. ISO 14044: 2006/Amd1:2017/Amd2 2020/ Environmental Management – Life cycle assessment – Requirements and Guidelines.
5. ISO 21930: 2017 Sustainability in buildings and civil engineering works – Core rules for environmental product declarations of construction products and services.
6. SCS Type III Environmental Declaration Program: Program Operator Manual. V12.0 December 2023. SCS Global Services.
7. NSF/ASTM PCR for Interior Architectural Wood Door Leaves. Version 6. December 2022.
8. Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts (TRACI). U.S. EPA. <https://www.epa.gov/chemical-research/tool-reduction-and-assessment-chemicals-and-other-environmental-impacts-traci>
9. Ecoinvent Centre (2025) ecoinvent data from v3.12, Allocation cut-off by Classification. Swiss Center for Life Cycle Inventories, Dübendorf. 2025. <http://www.ecoinvent.org>
10. OpenLCA Software. Version 2.6.0. GreenDelta. 2026. <http://www.openlca.org>
11. ACLCA Guidance to Calculating Non-LCIA Inventory Metrics in Accordance with ISO 21930:2017. May 2019.
12. WARM Model Transportation Research - Draft." Memorandum from ICF Consulting to United States Environmental Protection Agency. September 7, 2004. <http://epa.gov/epawaste/conservation/tools/warm/SWMGHGreport.html#background>.



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