

EPD OPTIMIZATION ASSESSMENT



Mannington®
COMMERCIAL



Product: Integra® HP Broadloom with Nylon 6

Manufacturer: Mannington Commercial

Current EPD: Integra® HP Broadloom with Nylon 6 [EPD-IES-0016762](#) at EPD International. Valid: 3/4/2025 – 3/5/2030.

Reference EPD: Integra® HP Broadloom [EPD10392](#) at NSF. Valid: 6/30/2020 – 6/30/2025.

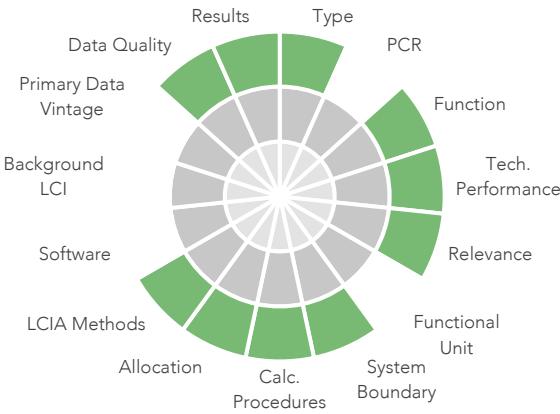
Comparison Type: Current EPD vs Previous EPD

Scope of Comparison: Cradle-to-Gate (A1-A3)

Period of Validity: 12/19/2025 – 3/5/2030

LEED Credit Achieved	<input type="checkbox"/> LEED v4.1: Option 2, less than -10% GWP <input type="checkbox"/> LEED v4.1: Option 2, greater than -10% GWP <input checked="" type="checkbox"/> LEED v4.1: Option 2, greater than -20% GWP	<input type="checkbox"/> LEED v5: BPSP w/ -20% GWP <input checked="" type="checkbox"/> LEED v5: BPSP w/ -40% GWP
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COMPARISON SUMMARY



The current EPD was compared to the reference EPD using 15 indicators. A single score of 0 (Not Comparable) or multiple scores of 1 (Problematic for Comparison) would result in the current and reference EPDs not being able to be compared.

For this comparison, two product-specific EPDs, covering the same product, were compared.

Impacts for 1m² of Integra® HP Broadloom with Nylon 6

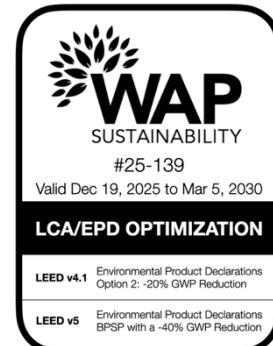
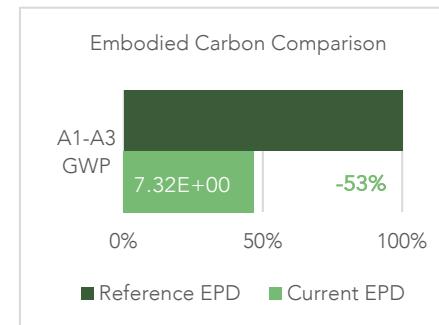
CML Impact Category*	Reference EPD				Current EPD				A1-A3 % change from Reference EPD
	A1-A3	A4-A5	B1-B4 ¹	C1-C4	A1-A3	A4-A5	B1-B4	C1-C4	
GWP	15.70	1.70	128.75	1.60	7.32	1.67	72.80	0.07	-53%
ODP	2.81E-05	1.60E-07	1.42E-04	8.00E-09	1.33E-08	6.68E-10	5.62E-08	1.80E-13	-100%
AP	5.83E-02	6.30E-03	4.30E-01	3.70E-04	1.14E-02	2.36E-03	1.06E-01	3.28E-04	-80%
EP	1.86E-02	2.60E-03	2.55E-01	6.30E-03	1.97E-03	6.38E-04	2.05E-02	7.04E-04	-89%
POCP	3.77E-03	8.20E-04	2.97E-02	3.40E-04	1.74E-03	3.80E-05	1.13E-02	2.45E-05	-54%
ADP _f	2.18E+02	2.80E+01	1.61E+03	8.50E-01	1.45E+02	3.24E+01	1.19E+03	1.02E+00	-33%

*GWP = Global Warming Potential [kg CO₂ eq], ODP = Ozone Depletion Potential [kg CFC 11-eq], AP = Acidification Potential [kg SO₂ eq], EP = Eutrophication Potential [kg N eq], ADP_f = Abiotic Depletion Potential – Fossil Fuels [MJ surplus energy]

¹Due to the RSL differences in the Reference and Current EPDs - Modules B1-B4 of reference EPD are recalculated from 60-year RSL to a 75-year RSL to be comparative with the Current EPD.

Impact Reduction Sources

Compared to the reference EPD, the current EPD shows a -53% reduction in A1-A3 global warming potential (GWP). This reduction is attributable to improvements made to the product's formulation and manufacturing efficiencies while maintaining the same high-performance characteristics.



COMPARABILITY ASSESSMENT



Per ISO 14025, “Type III environmental declarations are intended to allow a purchaser or user to compare the environmental performance of products on a life cycle basis. Therefore, comparability of Type III environmental declarations is critical. The information provided for this comparison shall be transparent in order to allow the purchaser or user to understand the limitations of comparability inherent in the Type III environmental declarations.” The table below showcases the criteria utilized to determine if the two EPDs are comparable.

Criteria	Score	Description
Product Category		
Product Type	3	The product types are equivalent.
Product Category Rule	2	The reference PCR uses NSF's Flooring: Carpet, Resilient, Laminate, Ceramic, Wood PCR. The current PCR uses UL Part B: Flooring EPD Requirements PCR.
Function	3	The function is the same for both products.
Technical Performance	3	It is assumed the technical performance is equivalent between the two products.
Relevant Comparison	3	The products are equivalent in both the reference and current EPD.
Scope		
Functional Unit	2	The functional units for both products are equivalent at 1m ² , with the exception to the stated building service life. The reference EPD uses a 60-year building service life, and the current EPD uses a 75-year building service life.
System Boundary	3	To minimize assumption bias in this comparison, only A1-A3 is considered for both products.
Calculation Procedures	3	Same procedures, assumptions, and methodologies were used in the reference and current EPD.
Allocation	3	The same allocation rules were followed.
LCIA Method	3	The same LCIA method was used and the same indicators reported.
Data and Results		
Software	2	The reference EPD uses SimaPro v9.0, while the current EPD uses LCA For Experts v10.7 (formerly GaBi) software.
Background LCI Data	2	The reference EPD utilizes the Ecoinvent v3.5 database from 2016, while the current EPD uses Sphera Managed LCA Content Database from 2023.2.
Primary Data Vintage	2	The reference EPD utilizes 2019 primary data, while the current EPD uses 2022 data.
Data Quality	3	All assumptions are equivalent.
Results	3	Results were presented with the same groupings by LCIA indicator.

Based on this comparability assessment, the products in question are deemed comparable for the purposes of LEED credit achievement. It is WAP Sustainability's professional opinion that Integra® HP Broadloom with Nylon 6 from Mannington Commercial meets the following LEED Materials and Resource Credit, Environmental Product Declaration for:

- LEED v4.1, Option 2 criteria: over -20% GWP Reduction
- LEED v5, BPSP with a -40% GWP Reduction

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