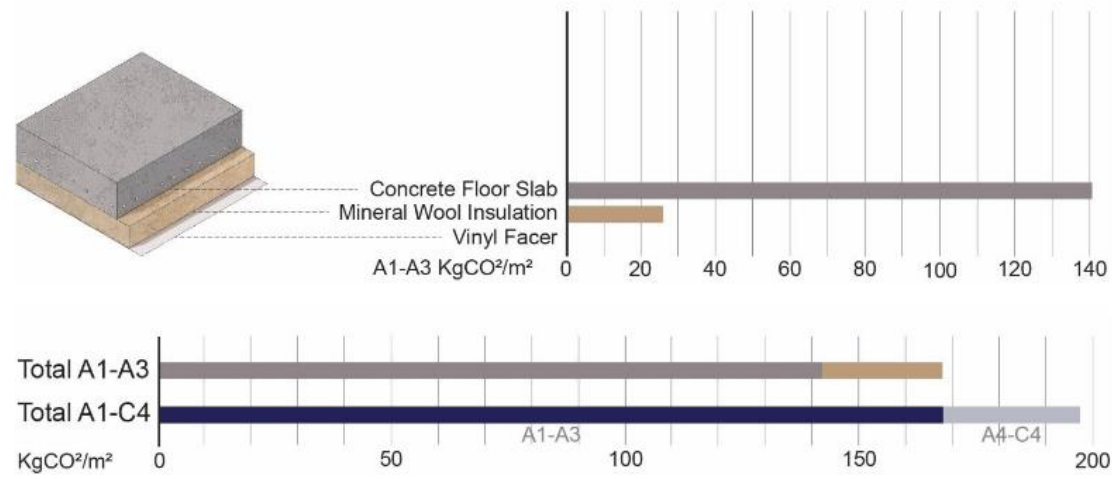


APPENDIX A FLOOR ASSEMBLY 01

F01: Results Summary

Metrics	Results
Description	Parking Garage Concrete Ceiling with Vinyl-Faced Mineral Wool
Effective R-value	RSI-4.6 m ² K/W R-26 ft ² ·°F·h/BTU
Embodied Carbon per m ² of Enclosure (A1-A3)	168.4 kgCO ₂ /m ²
Biogenic Carbon per m ² of Enclosure	0 kgCO ₂ /m ²



F01: Assembly Effective R-value Calculation

Description	t _{si}	t _{ip}	k	C (USI)	RSI _{effective}	R _{effective}	R _{nominal}
Units	mm	in	W/mK	W/m ² K	m ² K/W	ft ² ·°F·h/BTU	ft ² ·°F·h/BTU
Interior air film					0.11	0.61	
Concrete floor slab	254.00	10.00	1.60	6.30	0.16	0.90	
Semi-rigid mineral fiber exterior insulation	152.40	6.00	-	-	4.29	24.35	24.60
Vinyl facing	0.26	0.01	-	-	-	-	
Exterior air film					0.03	0.17	
TOTALS	406.7	16.0			4.6	26.0	24.6

F01: Embodied Carbon Emissions (A1 to A3 Life Stages) for 9m² Assembly Area

Category	Material	Description (from EPD)	Thickness	Material Volume	Carbon Emissions (A1-A3)	% of total
Units			mm	m ³	kgCO ₂ e	%
Structure	Concrete Floor Slab	Ready-mix concrete, 35MPa GU cem. with air entr. 0-14% FA/SC (CRMCA)	254 (10")	2.29	1030.02	67.9%
		Reinforcement steel (rebar), generic, 60% recycled content, A615	-	0.023	241.77	15.9%
Insulation	Mineral Wool (Semi-rigid)	Heavy density mineral wool board, 1 m ² K/W, 34 mm, 4.2 kg/m ² , 123.52 kg/m ³ , Industry average US (NAIMA)	152.4 (6")	1.37	242.18	16.0%
		Polypropylene film (ASJ) used as insulation facing, 0.152 kg/m ² , Micro-Lok® HP Ultra (Johns Manville)	0.26 (0.01 ")	0.0023	1.95	0.1%
TOTAL					1515.92	100.0%

*Software auto-calculates the impact based on the area provided.

F01: Environmental Emissions (A1 to C4 Life Stages) for 9m² Assembly Area

Lifecycle Stage	A1 to C4	A1-A3	A4-A5	B1-B5	C1-C4	A1-A3 Contribution to total	
Category	Units	Total	Construction Materials	Transport to Site & Construction	Material Replacement & Refurbishment	Deconstruction	
Global Warming	kg CO ₂ e	1,775.99	1,515.92	134.45	52.27	73.35	85.36%
Acidification	kg SO	6.24	5.74	0.20	0.04	0.26	91.92%
Eutrophication	kg Ne	1.92	1.75	0.09	0.01	0.07	91.31%
Ozone Depletion	kg CFC11e	0.00008	0.00003	0.00003	0.0000002	0.00002	40.18%
Formation of Tropospheric Ozone	kg O ₃ e	108.55	98.58	2.37	1.20	6.40	90.81%
Fossil Fuel Primary Energy	MJ	11,642.66	8,600.65	1,981.67	20.15	1,040.19	73.87%
Biogenic Carbon Storage	kg CO ₂ e	0	0	0	0	0	