

CARBON FACTORS



Material - Type - Specification	A1-A3	A4	WF	C2	C3 / C4	C2 to C4	D	Total A1-A5w	Total A-C	Sequestration	Reference
C32/40 - CEM I (OPC)	0.149	0.005	0.053	0.005	0.013	0.018	0.004	0.163	0.181		ICE Database v3.0
C32/40 - 25% GGBS	0.120	0.005	0.053	0.005	0.013	0.018	0.004	0.133	0.151		How to Calculate Embodied Carbon v1.0 (2020)
C32/40 - 50% GGBS	0.089	0.005	0.053	0.005	0.013	0.018	0.004	0.100	0.118		How to Calculate Embodied Carbon v1.0 (2020)
C32/40 - 75% GGBS	0.063	0.005	0.053	0.005	0.013	0.018	0.004	0.073	0.091		How to Calculate Embodied Carbon v1.0 (2020)
Concrete - Generic - C16/20 - CEM I (OPC)	0.113	0.005	0.053	0.005	0.013	0.018	0.004	0.125	0.143		How to Calculate Embodied Carbon v1.0 (2020)
Concrete - Mortar_screed - 1:4 cement:sand mix CEM I	0.163	0.005	0.053	0.005	0.013	0.018	0.004	0.178	0.196		How to Calculate Embodied Carbon v1.0 (2020)
Concrete - Mortar_screed - 1:4 cement:sand mix avg UK cement mix	0.149	0.005	0.053	0.005	0.013	0.018	0.004	0.163	0.181		How to Calculate Embodied Carbon v1.0 (2020)
Concrete - Precast_concrete - C40/50 avg UK cement mix	0.178	0.005	0.010	0.005	0.013	0.018	0.004	0.185	0.203		How to Calculate Embodied Carbon v1.0 (2020)
Concrete - Precast_concrete - Reinforced - 150mm hollow core slab	0.166	0.005	0.010	0.005	0.013	0.018	0.004	0.173	0.191		How to Calculate Embodied Carbon v1.0 (2020) Ref. 17
Steel - Rebar - UK: UK CARES avg EPD	0.760	0.032	0.053	0.005	0.013	0.018	0.351	0.835	0.853		How to Calculate Embodied Carbon v1.0 (2020)
Steel - Rebar - Worldwide: world avg	1.990	0.183	0.053	0.005	0.013	0.018	-0.790	2.289	2.307		How to Calculate Embodied Carbon v1.0 (2020)
Steel - PT_strands - UK: UK CARES Avg EPD	0.760	0.032	0.053	0.005	0.013	0.018	0.351	0.835	0.853		How to Calculate Embodied Carbon v1.0 (2020)
Steel - PT_strands - Worldwide: world avg	1.990	0.183	0.053	0.005	0.013	0.018	-0.790	2.289	2.307		How to Calculate Embodied Carbon v1.0 (2020)
Steel - Structural_sections - UK open sections	2.450	0.032	0.010	0.005	0.013	0.018	-1.600	2.507	2.525		How to Calculate Embodied Carbon v1.0 (2020)
Steel - Structural_sections - UK hollow sections	2.500	0.032	0.010	0.005	0.013	0.018	-1.530	2.558	2.576		How to Calculate Embodied Carbon v1.0 (2020)
Steel - Structural_sections - Europe avg EPD	1.130	0.160	0.010	0.005	0.013	0.018	-0.413	1.303	1.321		How to Calculate Embodied Carbon v1.0 (2020)
Steel - Structural_sections - World avg	1.550	0.183	0.010	0.005	0.013	0.018	-0.340	1.751	1.769		How to Calculate Embodied Carbon v1.0 (2020)
Steel - Plate -	2.450	0.032	0.010	0.005	0.013	0.018	-1.600	2.507	2.525		How to Calculate Embodied Carbon v1.0 (2020)
Steel - Galvanised_profiled_sheet (e.g. decking) -	2.740	0.032	0.010	0.005	0.013	0.018	-1.150	2.800	2.818		How to Calculate Embodied Carbon v1.0 (2020)
Steel - Hot Rolled Galvanised -	2.760	0.032	0.010	0.005	0.013	0.018	-1.320	2.820	2.838		How to Calculate Embodied Carbon v1.0 (2020)
Timber - Engineered_timber - CLT	0.437	0.160	0.010	0.005	1.662	1.667	-0.524	0.620	0.647	-1.64	How to Calculate Embodied Carbon v1.0 (2020)
Timber - Engineered_timber - Glulam	0.512	0.160	0.010	0.005	1.662	1.667	-0.524	0.695	0.722	-1.64	How to Calculate Embodied Carbon v1.0 (2020)
Timber - Studwork_framing_flooring - Softwood	0.263	0.160	0.111	0.005	1.662	1.667	-0.524	0.655	0.682	-1.64	How to Calculate Embodied Carbon v1.0 (2020)
Timber - Studwork_framing_flooring - Hardwood	0.306	0.160	0.111	0.005	1.662	1.667	-0.524	0.703	0.780	-1.59	ICE Database v3.0
Timber - Sheet_materials - Plywood	0.681	0.160	0.111	0.005	1.662	1.667	-0.524	1.119	1.146	-1.64	How to Calculate Embodied Carbon v1.0 (2020)
Other - Brickwork - Engineering clay brick	0.213	0.032	0.250	0.005	0.013	0.018	0.000	0.311	0.329		How to Calculate Embodied Carbon v1.0 (2020)
Other - Brickwork - Brick wall with mortar 1:4 CEM I cement:sand mix	0.200	0.032	0.250	0.005	0.013	0.018	0.000	0.295	0.313		How to Calculate Embodied Carbon v1.0 (2020)
Other - Blockwork - PCC Lightweight (AAC) blocks	0.280	0.032	0.250	0.005	0.013	0.018	0.000	0.395	0.413		How to Calculate Embodied Carbon v1.0 (2020)
Other - Blockwork - PCC Dense blocks	0.093	0.032	0.250	0.005	0.013	0.018	0.000	0.161	0.179		How to Calculate Embodied Carbon v1.0 (2020)
Other - Stone - Granite	0.700	0.032	0.111	0.005	0.013	0.018	0.000	0.815	0.833		How to Calculate Embodied Carbon v1.0 (2020)
Other - Stone - Limestone	0.090	0.032	0.111	0.005	0.013	0.018	0.000	0.138	0.156		How to Calculate Embodied Carbon v1.0 (2020)
Other - Stone - Sandstone	0.060	0.032	0.111	0.005	0.013	0.018	0.000	0.104	0.122		How to Calculate Embodied Carbon v1.0 (2020)
Other - Glass - General	1.440	0.032	0.053	0.005	0.013	0.018	0.000	1.551	1.569		How to Calculate Embodied Carbon v1.0 (2020)
Other - Glass - Toughened	1.670	0.032	0.053	0.005	0.013	0.018	0.000	1.793	1.811		How to Calculate Embodied Carbon v1.0 (2020)
Other - Granular_fill -	0.007	0.005	0.053	0.005	0.013	0.018	0.000	0.014	0.032		ICE Database v3.0 for A1-A3, other modules set to same as concrete.
Other - Aluminium - Sheet - European - 31% recycled content	6.580	0.160	0.010	0.005	0.013	0.018	0.000	6.808	6.826		How to Calculate Embodied Carbon v1.0 (2020)
Other - Intumescent Paint - Amotherm Steel WB EPD	2.31	0.160	0.053	0.005	0.013	0.018	0.000	2.602	2.620		HTCEC v1.0 (2020) for A1-A4, other values set to same as steel