

**CO2 emissions and Environmental Cost Index comparison BFRP vs Steel**

Properties	Rebar diameter					
	6mm		8mm		10mm	
	BFRP	Steel B500	BFRP	Steel B500	BFRP	Steel B500
Weight of the 1 linear meter	0,0695	0,222	0,113	0,395	0,171	0,617
Tensile strength per cm2, MPa	1100	500	1100	500	1100	500
Linear meters per 1 kg of rebar	14,38849	4,504505	8,849558	2,531646	5,847953	1,620746
Environmental Cost Index, per 1 kg of rebar	0,33	0,428	0,33	0,428	0,33	0,428
Environmental Cost Index, per linear meter of rebar	0,022935	0,095016	0,03729	0,16906	0,05643	0,264076
CO2 emissons (GWP total) per kg of rebar	3,19	2,12	3,14	2,12	3,2	2,12
CO2 emissons (GWP total) per linear meter of rebar	0,221705	0,47064	0,35482	0,8374	0,5472	1,30804
CO2 emissons (GWP total) per linear meter of rebar scaled to 1MPa of tensile surface	0,002269	0,010597	0,002043	0,010606	0,002016	0,010603
Relative CO2 emissions (GWP total) per MPa of tensile strength	100,00%	467,02%	100,00%	519,22%	100,00%	525,89%
<b>Calculation properties</b>						
Surface (in mm2)	88,82644	88,82644	157,9137	157,9137	246,7401	246,7401
Tensile strength of surface	97,70908	44,41322	173,705	78,95684	271,4141	123,3701
Tensile strength of 1 linear meter	1405,886	200,0595	1537,213	199,8907	1587,217	199,9515

