

Moisture content, gross calorific value, net calorific value, bulk density and energy density of biomass fuels

Biofuel	Moisture content	GCV	NCV	Bulk density	Energy density
	[wt% w.b.]	[MJ/kg d.b.]	[MJ/kg d.b.]	[kg w.b./m³]	[MJ/m³]
Wood pellets	10.0	19.8	16.4	600	9840
Woodchips - hardwood	30.0	19.8	12.2	320	3900
- pre-dried					
Woodchips - hardwood	50.0	19.8	8.0	450	3600
Woodchips - softwood	30.0	19.8	12.2	250	3050
- pre-dried					
Woodchips - softwood	50.0	19.8	8.0	350	2800
Grass --- high-pressure bales	18.0	18.4	13.7	200	2740
Bark	50.0	20.2	8.2	320	2620
Triticale (cereals) --- high-pressure bales	15.0	18.7	14.5	175	2540
Sawdust	50.0	19.8	8	240	1920
Straw (winter wheat) --- high-pressure bales	15.0	18.7	14.5	120	1740
Olive residues (from)					
2 - phase production	63.0	21.5	6.1	1130	6890
3 - phase production	53.0	22.6	8.5	650	5530

Abbreviations: GCV = gross calorific value; NCV = net calorific value; d.b. = dry basis; w.b. = wet basis