Chipped woodfuel quality standard

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Based upon ONORM M 7133

Raw material

Must be composed of clean / untreated wood products and co-products from the agricultural, forestry and timber processing sectors and be free of contamination (i.e. anything other than wood). Expert advice should be sought before using material from other sources.

Particle size

Chipped woodfuel is classified in three grades, according to maximum particle size and distribution of particle size, as follows:

Parameter	Measurement	G30 fine	G50 medium	G100 coarse
Max cross sectional area	*cm^2*	3	5	10
Max length (long thin material)	*cm*	8.5	12	25
Coarse material, max 20%	*retained by sieve mesh width, mm*	16	31.5	63
Main material, 60 to 100%	*retained by sieve mesh width, mm*	2.8	5.6	11.2
Fine material (inc dust), max 20%	*retained by sieve mesh width, mm*	1	1	1
Dust, max 4%	*Passing sieve mesh width, mm*	1	1	1

Illustration of particle size distribution

Coarse material, no more than 20% of the sample

……/……/……/……/……/……/……/……/……/……/……/……/……/…… *coarse sieve*

Main material, 60 to 100% of the sample

…./…./…./…./…./…./…./…./…./…./…./…./…./…./…./…./…./…./…./…. *mid sieve*

Fine material, no more than 20% of the sample

./././././././ ./. *1mm sieve*

Dust, no more than 4% of the sample

Moisture content

Moisture content must be within the defined specification for the particular equipment selected. Moisture content should be expressed in gross (rather than net) terms, that is:

Woodfuel Moisture Content = (weight of water in sample / total weight of sample) x 100%

Moisture Content classes may be defined as follows:

Well seasoned	up to 20%
Durable in store	up to 30%
Semi-durable in store	up to 35%
Moist	up to 40%
Green	up to 50%

Boiler plant maximum moisture content tolerance is expressed as a %: e.g. W40 = max 40% Moisture Content

Ash content

In two grades, as a % of bone dry weight;

Low bark content	up to 0.5%
High bark content	0.5% to 2.0%

Bulk density

In three grades, expressed as the bone dry bulk density of the chipped product:

Low density	up to 160 kg/m3	e.g. poplar, willow, fir
Medium density	160 to 200 kg/m3	e.g. pine, larch, birch, alder
High density	greater than 200 kg/m3	e.g. beech, oak

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