

Biomass Product Specification Reference

Reference ranges for PKS, EFB pellet, EFB briquette, and wood pellet. Final commercial specs must be confirmed by lot-specific Certificate of Analysis.

How to use this reference

- Use these ranges as screening references only.
- Request a Certificate of Analysis before contract finalization.
- Moisture, ash, chlorine, durability, and bulk density affect boiler fit and delivered energy economics.

PKS (Palm Kernel Shell) — Raw Biomass

Parameter	Range	Note
Gross Calorific Value (ADB)	18.0-20.0 MJ/kg	4,300-4,800 kcal/kg
Moisture Content (ARB)	<=18%	Target <15% for premium grade
Ash Content	1.5-4.0%	Low slagging risk
Bulk Density	600-650 kg/m ³	Efficient shipping economics
Chlorine	0.05-0.15%	Within common co-firing limits
Size	5-20 mm	Irregular shells

EFB Pellet — Processed Biomass

Parameter	Range	Note
Gross Calorific Value (ADB)	16.0-18.0 MJ/kg	3,800-4,300 kcal/kg
Moisture Content (ARB)	10-15%	
Ash Content	5-10%	Verify boiler tolerance
Bulk Density	550-650 kg/m ³	
Diameter / Length	6-8 mm / 10-30 mm	Standard pellet dimensions
Mechanical Durability	>95%	

EFB Briquette — Processed Biomass

Parameter	Range	Note
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Gross Calorific Value (ADB)	15.5-17.5 MJ/kg	3,700-4,200 kcal/kg
Moisture Content (ARB)	12-18%	
Ash Content	5-10%	
Bulk Density	700-800 kg/m3	Dense format for freight efficiency
Size	70-100 mm x 100-250 mm	For grate-fired and chain-grate boilers
Chlorine	0.3-0.8%	Same raw material as EFB pellet

Wood Pellet — Processed Biomass

Parameter	Range	Note
Gross Calorific Value (ADB)	17.5-19.5 MJ/kg	4,300-4,800 kcal/kg
Moisture Content (ARB)	8-12%	Lower moisture than EFB products
Ash Content	0.8-2.5%	Suitable for high-performance boilers
Bulk Density	580-650 kg/m3	
Chlorine	<0.05%	Meets common Japanese and EU co-firing specs
Mechanical Durability	>97%	ISO A2 grade or above

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