

# DENSIFIED FUEL STANDARDS

The Pellet Fuels Institute has developed a set of standard specifications to be used in evaluating quality of densified biomass pellets. These are the standards for commercial densified fuel standards. Which parameters met the standards and which did not? Which sample seems to be best suited as commercial densified fuel and why?

Fuel Property	Residential/Commercial Densified Fuel Standards		
	See Notes 1 - 3		
	PFI Premium	PFI Standard	PFI Utility
<b>Normative Information - Mandatory</b>			
Bulk Density, lb./cubic foot	40.0 - 46.0	38.0 - 46.0	38.0 - 46.0
Diameter, inches	0.230 - 0.285	0.230 - 0.285	0.230 - 0.285
Diameter, mm	5.84 - 7.25	5.84 - 7.25	5.84 - 7.25
Pellet Durability Index	≥ 96.5	≥ 95.0	≥ 95.0
Fines, % (at the mill gate)	≤ 0.50	≤ 1.0	≤ 1.0
Inorganic Ash, %	≤ 1.0	≤ 2.0	≤ 6.0
Length, % greater than 1.50 inches	≤ 1.0	≤ 1.0	≤ 1.0
Moisture, %	≤ 8.0	≤ 10.0	≤ 10.0
Chloride, ppm	≤ 300	≤ 300	≤ 300
Heating Value	NA	NA	NA
<b>Informative Only - Not Mandatory</b>			
Ash Fusion	NA	NA	NA

Which of the samples that you evaluated seemed farthest from the standards? How might you advise the pellet manufacturer to improve their densification process to allow the material to better fit the parameters defined by the commercial densified fuel standard?

## BIOMASS DENSIFICATION AND QUALITY OF DENSIFIED BIOMASS