

Annex 1 (Rev. 1)**Fuel-Related Technical Requirements**

Properties	Unit	Requirements
Diameter	mm	D06, $6 \pm 1,0$; D08, $8 \pm 1,0$
Length ¹⁾	mm	$3,15 \leq L \leq 40$
Moisture content	mass-% (ar)*	≤ 10
Ash content	mass-% (db)**	$\leq 0,7$
Mechanical durability	mass -% (ar)*	$\geq 98,0$
Fines content at the end of the production process ²⁾	mass -% (ar)*	Small packaging units (until 20 kg): $\leq 0,5$ Bigger packaging units and bulk: $\leq 1,0$
Net calorific value	MJ/kg (ar)* kWh/kg (ar)*	$\geq 16,5$ $\geq 4,6$
Bulk density ⁵⁾	kg/m ³ (ar)*	$600 \leq BD \leq 750$
Additives ^{3,4)***)}	mass -% (ar)*	≤ 2
Nitrogen	mass -% (db)**	$\leq 0,3$
Sulphur	mass -% (db)**	$\leq 0,04$
Chlorine	mass -% (db)**	$\leq 0,02$
Arsenic	mg/kg (db)**	≤ 1
Cadmium	mg/kg (db)**	$\leq 0,5$
Chromium	mg/kg (db)**	≤ 10
Copper	mg/kg (db)**	≤ 10
Lead	mg/kg (db)**	≤ 10
Mercury	mg/kg (db)**	$\leq 0,1$
Nickel	mg/kg (db)**	≤ 10
Zinc	mg/kg (db)**	≤ 100
Ash deformation temperature ⁶⁾ (DT)	°C	≥ 1200

1) Permissible maximum pellet length: ≤ 45 mm; permissible amount of pellets between 40 – 45 mm: 1 % (mass fraction); for pellets remaining on a round-hole sieve with a hole size of 3.15 mm, their length is: > 3.15 mm; Recommendation: Specify in % (mass fraction) the amount of pellets with a length: < 10 mm;

2) Particles: $< 3,15$ mm;

3) Mandatory specification: Type of additive (e.g., inhibitors of slag formation, cornmeal, starch, vegetable oil, potato meal, lignin → admixture permissible concerning manufacturing, combustion, or delivery);

4) Additional material that is added to the raw material in the production process to improve fuel quality (e.g., combustion properties), reduce emissions, or for more efficient production;

5) Recommendation: Specify the actual bulk density → significant for stoves and burners without automatic air supply adjustment, sensitive to bulk density fluctuations;

6) Recommendation: Specify all characteristic temperatures under oxidizing conditions at a pre-ashing temperature of 815° C → temperature at the beginning of shrinkage (SST), deformation temperature (DT), hemisphere temperature (HT), flow temperature (FT)

*) (ar) = as received
 **) (db) = dry basis
 ***) The measurement of the percentage of additives is not part of the laboratory tests and must be exclusively conducted within the quality assurance of the certificate holder (Type 1).

Table No. 2: Fuel-Related Technical Requirements according to DIN EN ISO 17225-2