

TEST REPORT

BEA250169D

Date of report: 2025-01-16

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Client: DIN CERTCO Gesellschaft für Konformitätsbewertung mbH (Attn. Mr. Meuser)

Address: Alboinstraße 56, 12103 Berlin, Deutschland

Order: Fuel testing according DINplus certification Scheme for wood pellets (Version 11/2021)

Order date: 2024-12-28

Receipt of samples: 2025-01-08

Sample(s): Wood pellets "Drewnoland S.C.; 7A450; proc. no. 3402792"



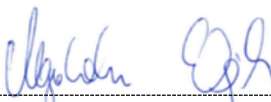

Testing period: 2025-01-08 – 2025-01-15

Sample details: 15 kg pellets "6mm/DREWNOLAND/2024-1" in plastic bag class A1 with internal sample no.: BEA250169

parameter DINplus	limit values A1	6mm/DREWNOLAND/2024-1	result	unit
diameter	6 ± 1, 8 ± 1		6,1	mm (ar)
length (3,15 ≤ L ≤ 40 mm)	(3,15 ≤ L ≤ 40)		13,0 ± 4,6	mm (ar)
length (40 ≤ L ≤ 45 mm)	≤ 1		0	% in mass (ar)
length (> 45 mm)	0		0	piece(s)
share of pellets with a length < 10mm	-		18,9	% in mass (ar)
moisture content	≤ 10,0		5,9	% in mass (ar)
ash content	≤ 0,6		0,5	% in mass (db)
mechanical durability	≥ 98,0		98,0	% in mass (ar)
bulk density	600 ≤ BD ≤ 750		640	kg/m ³ (ar)
finer content (< 3,15 mm), bulk	≤ 1		-	% in mass (ar)
finer content (< 3,15 mm), bags	≤ 0,5		0,4	% in mass (ar)
net calorific value q _{P,net}	≥ 16,5		18,0	MJ/kg (ar)
net calorific value q _{P,net}	≥ 4,6		4,99	kWh/kg (ar)
net calorific value q _{P,net}	-		19,2	MJ/kg (db)
net calorific value q _{P,net}	-		5,35	kWh/kg (db)
gross calorific value q _{V,gr}	-		19,5	MJ/kg (ar)
gross calorific value q _{V,gr}	-		5,41	kWh/kg (ar)
nitrogen content	≤ 0,3		0,08	% in mass (db)
sulphur content	≤ 0,04		0,007	% in mass (db)
chlorine content	≤ 0,02		<0,005	% in mass (db)
arsenic	≤ 1		<0,5	mg/kg (db)
cadmium	≤ 0,5		0,26	mg/kg (db)
chromium	≤ 10		<1	mg/kg (db)
copper	≤ 10		<1	mg/kg (db)
lead	≤ 10		<0,5	mg/kg (db)
mercury	≤ 0,1		<0,075	mg/kg (db)
nickel	≤ 10		<1	mg/kg (db)
zinc	≤ 100		11	mg/kg (db)
shrinking temperature SST	-		1030	°C
deformation temperature DT	≥ 1200		1380	°C
hemisphere temperature HT	-		1510	°C
flow temperature FT	-		>1550	°C

db... dry basis, ar... as received

The test results apply only to the samples investigated. As a rule, they are not the only criteria for assessing the raw material or product in question and its suitability for a specific purpose of application. Test Reports may only be made available to third parties, either free of charge or against payment, if the full wording is given and if the author is expressly named. Unless otherwise indicated, at client's request neither the measurement uncertainty was stated, nor were decision rules agreed. The General Terms and Conditions of BEA Institut für Bioenergie GmbH shall apply as amended.

 	director in charge  DI(FH) Magdalena Wojcik	



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testing methods



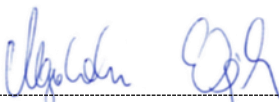

standard

diameter and length	ISO 17829:2015
moisture content	ISO 18134-2:2017
ash content	ISO 18122:2022
mechanical durability	ISO 17831-1:2015
finest content < 3,15 mm	ISO 5370:2023
net calorific value /gross calorific value	ISO 18125:2017
bulk density	ISO 17828:2015
carbon, hydrogen, nitrogen content	ISO 16948:2015
chlorine, sulphur content	ISO 16994:2016, quantification according to ISO 10304-1:2007
minor elements	ISO 16968:2015, quantification according to ISO 17294-2:2023
ash melting behaviour	ISO 21404:2020, ash preparation at 815°C, oxidizing atmosphere

remarks

According to the submitted sampling report and order with pictures of pellets bag, the sampling was performed on the 20.12.2024 by Mrs. Agnieszka Kędziora-Urbanowicz at Drewnoland S.C.; procedure no.: 3402792

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