

TEST REPORT

BEA250284

Date of report: 2025-02-17

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Client: Control Union Certifications Germany GmbH

Address: Bornitzstraße 73-75, 10365 Berlin, GERMANY

Order: Fuel testing according ENplus® certification program of wood pellets ENplus® ST.1001:2022

Order date: 2024-12-23; PRJ:853789

Receipt of samples: 2025-02-04

Sample(s): 6 mm wood pellets;

Testing period: 2025-02-05 – 2025-02-14

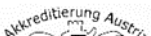



Sample details: 15 kg pellets in plastic bag class A1

; internal sample no.: BEA250284

BEA250284			result	
parameter ENplus®	limit values A1	limit values A2	2024-UN	unit
diameter	6 ± 1, 8 ± 1	6 ± 1, 8 ± 1	6,1	mm (ar)
length (3,15 ≤ L ≤ 40 mm)	(3,15 ≤ L ≤ 40)	(3,15 ≤ L ≤ 40)	13,6 ± 5,5	mm (ar)
length (40 ≤ L ≤ 45 mm)	≤ 1	≤ 1	0,1	%in mass (ar)
length (> 45 mm)	0	0	0,0	piece(s)
amount of pellets for length	≥ 100	≥ 100	1 414	piece(s)
moisture content	≤ 10,0	≤ 10,0	6,3	%in mass (ar)
ash content	≤ 0,70	≤ 1,20	0,32	%in mass (db)
mechanical durability	≥ 98,0	≥ 97,5	98,0	%in mass (ar)
bulk density	600 ≤ BD ≤ 750	600 ≤ BD ≤ 750	670	kg/m³ (ar)
particle density	-	-	1,29	g/cm³ (ar)
coarse fines (3,15 ≤ CPF < 5,6	-	-	0,9	%in mass (ar)
fines content (< 3,15 mm), bulk	≤ 1	≤ 1	-	%in mass (ar)
fines content (< 3,15 mm), bags	≤ 0,5	≤ 0,5	0,4	%in mass (ar)
net calorific value q _{P,net}	≥ 16,5	≥ 16,5	18,3	MJ/kg (ar)
net calorific value q _{P,net}	≥ 4,6	≥ 4,6	5,10	kWh/kg (ar)
net calorific value q _{P,net}	-	-	19,7	MJ/kg (db)
net calorific value q _{P,net}	-	-	5,48	kWh/kg (db)
gross calorific value q _{V,gr}	-	-	19,9	MJ/kg (ar)
gross calorific value q _{V,gr}	-	-	5,52	kWh/kg (ar)
nitrogen content	≤ 0,3	≤ 0,5	0,09	%in mass (db)
sulphur content	≤ 0,04	≤ 0,04	<0,005	%in mass (db)
chlorine content	≤ 0,02	≤ 0,02	0,005	%in mass (db)
arsenic	≤ 1	≤ 1	<0,5	mg/kg (db)
cadmium	≤ 0,5	≤ 0,5	0,23	mg/kg (db)
chromium	≤ 10	≤ 10	<1	mg/kg (db)
copper	≤ 10	≤ 10	<1	mg/kg (db)
lead	≤ 10	≤ 10	<0,5	mg/kg (db)
mercury	≤ 0,1	≤ 0,1	<0,075	mg/kg (db)
nickel	≤ 10	≤ 10	<1	mg/kg (db)
zinc	≤ 100	≤ 100	8,9	mg/kg (db)
shrinking temperature SST	-	-	1080	°C
deformation temperature DT	≥ 1200	≥ 1100	1450	°C
hemisphere temperature HT	-	-	>1550	°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.

Further the measurement uncertainty was stated, that was decision rules agreed. The General Terms and Conditions of ILAC Institut für Bioenergie GmbH shall apply as amended.			
		director in charge	
		 DI (FH) Magdalena Wojcik	