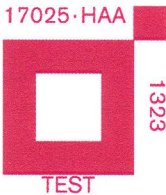




CENTRAL LABORATORY FOR CHEMICAL ANALYSIS
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LABORATORY REPORT no. CKTL 335/24

Date: 27.09.2024.

CUSTOMER SAMPLE CODE:	60124015 Quality class A1, 6 mm
SAMPLE TYPE:	Wood pellets
CUSTOMER NAME AND ADDRESS:	TÜV NORD Adriatic d.o.o., Bani 110, 10010 Zagreb
CLIENT NAME:	Građevinski obrt Špelić, HR021
SAMPLE QUANTITY:	15 kg
SAMPLING DATE AND TIME:	17 th September 2024, 11:00
SAMPLE DELIVERED BY:	Janja Kovačić, TÜV NORD Adriatic d.o.o.
DELIVERY DATE:	17 th September 2024, 13:10
TESTING PERIOD:	17.-27.09.2024.

TEST RESULTS:

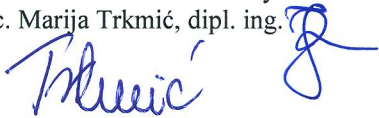
No	Property	Units	Test methods	Results		Relative UM (%)	ENplus® quality class	The standard limits for the ENplus® parameters		
				Dry	As received			ENplus® A1	ENplus® A2	ENplus® B
1.	Dimension *F ₀ (D&L)	mm	HRN EN ISO 17829:2015	Diameter: 6,4		0,8	A1	6 ± 1, 8 ± 1		
				Mean length: 15,1		2,6	A1	3,15 ≤ L ≤ 40		
2.	Pellets with length <10 mm *F ₀	w-%	HRN EN ISO 17829:2015	-	2,2	2,6	-	L < 20%, 20 ≤ M ≤ 30%, S > 30%		
3.	Pellets with length >40 mm *F ₀	w-%	HRN EN ISO 17829:2015	-	0	2,6	A1	<1		
4.	Pellets with length >45 mm *F ₀	-	HRN EN ISO 17829:2015	-	0	2,6	A1	0		
5.	Moisture *F ₀ (M)	w-%	HRN EN ISO 18134-1:2022	-	7,6	1,6	A1	≤ 10,0		
6.	Ash *F ₀ (A)	w-%	HRN EN ISO 18122:2022	0,53	0,49	2,2	A1	≤ 0,70 (d)	≤ 1,20 (d)	≤ 2,0 (d)
7.	Mechanical durability *F ₀ (DU)	w-%	HRN EN ISO 17831-1:2016	-	98,6	2,4	A1	≥ 98,0	≥ 97,5	
8.	Fines *F ₀ (F)	w-%	HRN EN ISO 5370:2023	-	0,05	3,3	A1	≤ 1,0 ¹⁾ ≤ 0,5 ²⁾		
9.	Net calorific value *F ₀	kWh/kg	HRN EN ISO 18125:2017	5,17	4,73	0,2	A1	≥ 4,6 (ar)		
10.	Bulk density *F ₀ (BD)	kg/m³	HRN EN ISO 17828:2016	-	650	2,2	A1	600 ≤ BD ≤ 750		
11.	Particle density *F ₀ (DE)	kg/m³	HRN EN ISO 18847:2024	-	1302	0,75	-	-		
12.	Coarse fines (3,15 mm ≤ CPF < 5,6 mm) *F ₀	w-%	HRN EN ISO 5370:2023 Annex A	-	0,06	3,3	-	-		

13.	Nitrogen content*  (N)	w-%	HRN EN ISO 16948:2015	0,16	0,15	4,52	A1	≤ 0,3 (d)	≤ 0,5 (d)	≤ 1,0 (d)
14.	Sulphur content*  (S)	w-%	HRN EN ISO 16994:2016	0,012	0,011	6,407	A1	≤ 0,04 (d)		
15.	Chlorine content*  (Cl)	w-%	HRN EN ISO 16994:2016	0,003	0,003	7,355	A1	≤ 0,02 (d)		≤ 0,03(d)
16.	Arsenic content*  (As)	mg/kg	HRN EN ISO 16968:2015	0,081	0,075	2,57	A1	≤ 1 (d)		
17.	Cadmium content*  (Cd)	mg/kg	HRN EN ISO 16968:2015	0,115	0,106	7,25	A1	≤ 0,5 (d)		
18.	Chromium content*  (Cr)	mg/kg	HRN EN ISO 16968:2015	0,692	0,639	2,63	A1	≤ 10 (d)		
19.	Copper content*  (Cu)	mg/kg	HRN EN ISO 16968:2015	1,10	1,02	0,34	A1	≤ 10 (d)		
20.	Lead content*  (Pb)	mg/kg	HRN EN ISO 16968:2015	0,198	0,183	0,64	A1	≤ 10 (d)		
21.	Mercury content*  (Hg)	mg/kg	HRN EN ISO 16968:2015	<0,005	<0,005	6,67	A1	≤ 0,1 (d)		
22.	Nickel content*  (Ni)	mg/kg	HRN EN ISO 16968:2015	0,591	0,546	2,15	A1	≤ 10 (d)		
23.	Zinc content*  (Zn)	mg/kg	HRN EN ISO 16968:2015	4,33	4,00	1,70	A1	≤ 100 (d)		

NOTE: ¹⁾ at factory gate or when loading truck for deliveries to end-users (Part Load Delivery and Full Load Delivery)
²⁾ at factory gate, when filling pellet bags or sealed Big Bags.
 accredited methods within flexible scope according HRN EN ISO/IEC 17025:2017 standard

- Measurement uncertainties are calculated, but not taken into account for determination of ENplus® quality class.
- Statements of conformity with ENplus® quality classes are reported according to Binary Statement for Simple Acceptance Rule (ILAC-G8:09/2019).
- The test results refer only to the tested samples.
- The test report or its parts cannot be reproduced, except in whole, with the approval of the Head of laboratory.

STATEMENT OF CONFORMITY:
All tested parameters **do meet all ENplus®** requirements for the **A1 class**.

Test report approved by:
Head of laboratory:
dr. sc. Marija Trkmić, dipl. ing.


THE END OF THE REPORT