

**CERTIFICATO ENplus®**  
**ENplus® CERTIFICATE**  
n. 279 (UA 036)

Si certifica che il pellet di legno per riscaldamento domestico prodotto da:  
*It is hereby certified that the wood pellets for heating purposes produced by:*

**Rodors Ltd**

**Petro Sahaidachnv str. building 3 – 30000 – Slavuta – Khmelnytsky - Ukraine**

*nel sito di:*

*at the plant of:*

**Petro Sahaidachnv str. building 3 – 30000 – Slavuta – Khmelnytsky - Ukraine**

risulta conforme ai requisiti del Manuale ENplus®

"Schema di certificazione della qualità del pellet di legno" rev.3.0, Agosto 2015 e alla classe di qualità:

*meets the requirements of the ENplus® Handbook*

*"Quality Certification Scheme for Wood Pellets" rev.3.0, August 2015 and at the quality class:*

**ENplus A1®**

a seguito di ispezione iniziale e di continua sorveglianza  
*based on an initial inspection and continuous surveillance/monitoring*

La validità di questo certificato può essere verificata su [www.enama.it](http://www.enama.it)  
*Validity of this certificate can be checked at [www.enama.it](http://www.enama.it)*

Data di prima emissione / *Date of first issue*: Roma, **05.09.2021**

Valido fino al / *Valid until*: Roma, **04.09.2024**

  
**ENAMA Servizi S.r.l.**

La validità del presente certificato è subordinata alla sorveglianza periodica e al riesame secondo le modalità contenute nel contratto ENAMA Servizi S.r.l. Il certificato può essere sospeso o revocato in caso di inadempienza accertata da ENAMA Servizi.

In adempimento ai requisiti indicati nel Manuale per la certificazione della qualità del pellet di legno ad uso energetico redatto da EPC (European Pellet Council), versione 3.0 (agosto 2015), il presente certificato viene rilasciato:  
- in Italia: in ottemperanza al contratto di convenzione tra ENAMA Servizi S.r.l. come Organismo di Certificazione e AIEL (Associazione Italiana Energie Agroforestali), come Gestore e Concessionario italiano della licenza ENplus®;  
- fuori dall'Italia: (per i paesi senza organismo di certificazione) in ottemperanza al contratto di convenzione tra ENAMA Servizi S.r.l. ed EPC come Gestore e Concessionario internazionale della licenza ENplus®.

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This certificate validity is subjected to periodical surveillance and review by ENAMA Servizi, according to the arrangements contained in the contract ENAMA Servizi S.r.l. This certificate can be suspended or withdrawn at any time in the event of no fulfilment of the due requirements, ascertained by ENAMA Servizi S.r.l.

In order to fulfil the requirements of the Handbook for the certification of wood pellet quality drafted by EPC (European Pellet Council), version 3.0 (August 2015), this certificate is issued:

- in Italy in compliance with the cooperation Agreement between ENAMA Servizi S.r.l. as Certification Body and AIEL (Agroforestry Energy Italian Association -Italian Management and Licensor of the ENplus® license);  
- outside Italy (for countries without a national certification body) in compliance with the cooperation Agreement between ENAMA Servizi S.r.l. and EPC (International Licensor and Management of the ENplus® license).



Lab Test Report n°: **23WL0006746** of **02/03/2023**

Customer.  
**ENAMA Servizi S.r.l.**  
Via Venafro, 5  
00159 ROMA RM

**Acceptance Date:** 30/01/2023  
**Test Beginning Date:** 30/01/2023  
**Test Result Date:** 01/03/2023

**Sample's data provided by the client**

**Matrix:** Solid biofuels  
**Description:** Wood pellet 6 mm - PU223KR-A1  
**Sample Weight:** 10 Kg  
**Supplier:** RODORS LTD  
**Batch:** After bagging  
**Origin:** 1.2.1.

**Sampling data provided by the client**

**Effectuated By:** customer  
**Technician:** Carlotta Tozzato  
**Sampling Date:** 21/12/2022  
**Site:** Petro Sahaidachnv str. building 3 -  
30000 - Slavuta - Khmelntvskv -  
Ukraine

Test Method	Result	Uncertainty	U.M.	LOQ	Class A1	Class A2	Class B
Diameter <i>UNI EN ISO 14780:2019 + UNI EN ISO 17829 : 2016</i>	<b>6,2</b>	±0,3	mm		5÷7	5÷7	5÷7
Mean length <i>UNI EN ISO 14780:2019 + UNI EN ISO 17829 : 2016</i>	<b>12,8</b>	±1,6	mm	3,1	3,15÷40	3,15÷40	3,15÷40
Pellets with length < 10 mm <i>UNI EN ISO 14780:2019 + UNI EN ISO 17829 : 2016</i>	<b>19,2</b>	±2,4	w-%	0,1			
Pellets with length > 40mm <i>UNI EN ISO 14780:2019 + UNI EN ISO 17829 : 2016</i>	<b>&lt; 0,1</b>		w-%	0,1	1	1	1
Pellets with length > 45 mm <i>UNI EN ISO 14780:2019 + UNI EN ISO 17829 : 2016</i>	<b>0</b>			0	0	0	0
Moisture <i>UNI EN ISO 14780 : 2019 + UNI EN ISO 18134-1 : 2015</i>	<b>8,67</b>	±0,45	w-%	1,00	10,0	10,0	10,0
Ash at 550° <i>UNI EN ISO 14780:2019 + UNI EN ISO 18122 : 2016</i>	<b>0,33</b>	±0,04	w-% s.s.	0,10	0,70	1,20	2,00
Mechanical durability <i>UNI EN ISO 14780 : 2019 + UNI EN ISO 17831-1 : 2016</i>	<b>98,8</b>	±0,3	w-%		> 98,0	> 97,5	> 96,5
Fine particles (<3,15mm) <i>UNI EN ISO 14780:2019 + ISO 18846:2017</i>	<b>0,6</b>	±0,1	w-%	0,1	1,0	1,0	1,0
* Coarse pellet fines <i>UNI EN ISO 14780:2019 + ISO 18846:2017</i>	<b>1,6</b>	±0,2	w-%	0,1			
o Net calorific value <i>ISO 18125:2018</i>	<b>4,8</b>	±0,5	kWh/kg	1,0	> 4,6	> 4,6	> 4,6
o Gross calorific value <i>ISO 18125:2018</i>	<b>5,1</b>	±0,6	kWh/kg	1,0			
* Particle density <i>UNI EN ISO 14780:2019 + ISO 18847:2017</i>	<b>1,2</b>		w-%	0,1			

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**Water & Life Lab srl**  
(Gruppe Carso) - Società unipersonale

Laboratory with quality management system certified according to the regulation  
UNI EN ISO 9001: 2015 by DNV-GL. Certificate n° 267539-2018-AQ-ITA-ACCREDIA

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info@waterlifelab.it  
www.waterlifelab.it

Capitale sociale 50.000 € i.v.  
C.F. / P.IVA 01855020168  
r.e.a. n. 242620



LAB N° 0081 L

Follows Lab Test Report n°: **23WL0006746** of **02/03/2023**

Test Method	Result	Uncertainty	U.M.	LOQ	Class A1	Class A2	Class B
Bulk density <i>UNI EN ISO 14780 : 2019 + UNI EN ISO 17828:2016</i>	<b>688</b>	±41	Kg/m3	10	600÷750	600÷750	600÷750
* Additives (data provided by the customer)	<b>&lt; 1,8</b>		w-%	1,8	2	2	2
o Shrinkage temperature <i>UNI EN ISO 21404:2020</i>	<b>1230</b>	±37	°C				
o Deformation temperature <i>UNI EN ISO 21404:2020</i>	<b>1380</b>	±28	°C		> 1200	> 1100	> 1100
o Flow temperature <i>UNI EN ISO 21404:2020</i>	<b>1430</b>	±26	°C				
o Hemisphere temperature <i>UNI EN ISO 21404:2020</i>	<b>1400</b>	±25	°C				
Arsenic <i>UNI EN ISO 14780:2019 + ISO 16968:2015 + UNI EN ISO 16170:2016</i>	<b>&lt; 0,4</b>		mg/kg s.s.	0,4	1	1	1
Cadmium <i>UNI EN ISO 14780:2019 + ISO 16968:2015 + UNI EN ISO 16170:2016</i>	<b>&lt; 0,2</b>		mg/kg s.s.	0,2	0,5	0,5	0,5
Chromium <i>UNI EN ISO 14780:2019 + ISO 16968:2015 + UNI EN ISO 16170:2016</i>	<b>0,7</b>	±0,2	mg/kg s.s.	0,2	10	10	10
Mercury <i>UNI EN ISO 14780:2019 + ISO 16968:2015 + UNI EN ISO 16170:2016</i>	<b>&lt; 0,04</b>		mg/kg s.s.	0,04	0,1	0,1	0,1
Nickel <i>UNI EN ISO 14780:2019 + ISO 16968:2015 + UNI EN ISO 16170:2016</i>	<b>0,3</b>	±0,1	mg/kg s.s.	0,2	10	10	10
Lead <i>UNI EN ISO 14780:2019 + ISO 16968:2015 + UNI EN ISO 16170:2016</i>	<b>0,2</b>	±0,1	mg/kg s.s.	0,2	10	10	10
Copper <i>UNI EN ISO 14780:2019 + ISO 16968:2015 + UNI EN ISO 16170:2016</i>	<b>0,8</b>	±0,2	mg/kg s.s.	0,4	10	10	10
Zinc <i>UNI EN ISO 14780:2019 + ISO 16968:2015 + UNI EN ISO 16170:2016</i>	<b>8,3</b>	±1,4	mg/kg s.s.	2,0	100	100	100
o Nitrogen <i>UNI EN ISO 16948 2015</i>	<b>0,5</b>	±0,1	w-% s.s.	0,1	0,3 >lim	0,5	1,0
o Chlorine <i>UNI EN ISO 16994:2017 Met A + UNI EN ISO 10304-1:2009</i>	<b>0,02</b>	±0,01	w-% s.s.	0,01	0,02	0,02	0,03
o Sulphur <i>UNI EN ISO 16994:2017 Met A + UNI EN ISO 10304-1:2009</i>	<b>&lt; 0,01</b>		w-% s.s.	0,01	0,04	0,04	0,05

Limit: Limits ISO 17225-2 (6mm)

LOQ: limit of quantification; U.M.: unit of measure

>lim: the parameters indicated by the symbol on the side are out of limits.

(\*) : The starred Test are not ACCREDIA qualified

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LAB N° 0081 L

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(°): The analyzes were performed by an external laboratory

Determinations of Nitrogen, Chlorine and Sulphur were carried out by an ACCREDIA accredited laboratory with number 33/L.

The container used for the determination of the bulk density complies with the requirements of point 5.1.3 of the method.

The result of Pellet length is the average of 50 measurements and the standard deviation calculated is 5.98.

The result of Pellet diameter is the average of 10 measurements and the standard deviation calculated is 0.085.

For the division of the sample, paragraph 8.6 of the UNI EN ISO 14780: 2019 standard has been applied.

The Mass of the Test portion for the determination of fines is 5747 g.

Determinations of Net calorific value and Gross calorific value were carried out by an ACCREDIA accredited laboratory with number 33/L.

The digestion of the sample intended for metal analysis has been performed with hydrogen peroxide and nitric acid.

The determination of the metals has been performed in ICP-OES.

Determinations of ash fusion, temp. of contraction, temp. of deformation, temp. of hemisphere, temp. slides were carried out by an ACCREDIA accredited laboratory with number 0668.

Notes: The sample received at the laboratory does not comply with the specifications defined by the acceptance for the following reason: integrity of the packaging.

Upon authorization by the customer, the Laboratory analyzed the sample, however, declines all responsibility for any influences attributable to the discrepancies highlighted regarding the results.

Uncertainty is expressed in the units of measurement of the parameter to which they refer. The coverage factor is  $k = 2$  with a 95% probability range.

For microbiological analysis, expressed on all matrix except waters, combined standard uncertainty is estimated according ISO 19036 as intralaboratory reproducibility standard deviation.

For microbiological analysis the expression of the result as "present / absent" for qualitative tests is to be intended as synonymous of the more correct wording "detected / not detected".

Water & Life Lab S.r.l. is registered, to the Lombardy Region Register of the laboratories that are authorized to perform analysis in the field of the self-control procedures of food industries with the progressive number 030016301004 (based on the General Health Management act number 893 of February 2nd 2011).

The Laboratory does not consider the rounding of the data and the uncertainty of measurement in comparison with the limits that may be applied in the Test Report.

If the sampling is not performed by Water & life lab, the results reported in this test report refer to the sample as received.

The laboratory declines all responsibility for the sample data provided by the client.

The results reported on this lab test report are exclusively referred to the tested sample.

This Lab Test Report can be reproduced fully only. The partial reproduction of this Lab Test Report is admitted only after the written authorization of the Water & Life Lab S.r.l. laboratory responsible.





Follows Lab Test Report n°: **23WL0006746** of **02/03/2023**

This test report is digitally signed pursuant to the current legislation.  
The authenticity of the test report is guaranteed by the file in .p7m format that is transmitted together with this document.

*Laboratory Manager*  
*P.I. Enio Belotti*

*Scientific Direction*  
*dr. Angelo Carlessi*

Order of Chemists and Physicists of  
Bergamo  
Chemist Section.A  
registration n°146

End of the test report n° **23WL0006746**

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