

For the production of
wood pellets produced by

Tunipellets SA in Zaghouan, TUNESIA

certified according to **ENplus® A1** with the ID number: **former TN001**

we confirm the following test results analysed within the inspection 2022 valid until
the inspection in 2023.

BEA2022317	Standard	unit	Pellets	Limit values for class A1 according	
				DINplus	ENplus®
mechanical durability	ISO 17831-1:2015	[%]	98,5	≥ 98,0	≥ 98,0
bulk density (ar)	ISO 17828:2015	[kg/m³]	650	750≥BD≥600	750≥BD≥600
moisture content	ISO 18134-2:2017	[%]	7,9	≤ 10	≤ 10
ash content 550°C (db)	ISO 18122:2015	[%]	0,6	≤ 0,6	≤ 0,7
net calorific value (ar)	ISO 18125:2017	[MJ/kg]	17,4	≥ 16,5	≥ 16,5
net calorific value (ar)	ISO 18125:2017	[kWh/kg]	4,8	≥ 4,6	≥ 4,6
net calorific value (db)	ISO 18125:2017	[MJ/kg]	19,1	-	-
net calorific value (db)	ISO 18125:2017	[kWh/kg]	5,3	-	-
gross calorific value (ar)	ISO 18125:2017	[MJ/kg]	18,9	-	-
gross calorific value (ar)	ISO 18125:2017	[kWh/kg]	5,3	-	-
Sulphur content (db)	ISO 16994:2016	[%]	0,030	≤ 0,04	≤ 0,04
Chlorine content (db)	ISO 16994:2016	[%]	0,008	≤ 0,02	≤ 0,02
Nitrogen content (db)	ISO 16948:2015	[%]	0,13	≤ 0,30	≤ 0,30
dimensions					
fines (< 3,15 mm)	ISO 18846:2016	[%]	0,1	≤ 0,5 ¹⁾ / ≤ 1	≤ 0,5 ¹⁾ / ≤ 1
length (40 ≤ L ≤ 45 mm)	ISO 17829:2015	[%]	0,0	≤ 1	≤ 1
length (> 45 mm)	ISO 17829:2015	[Amount]	0	0	0
diameter	ISO 17829:2015	[mm]	6	6 ± 1	6 ± 1
length	-	[mm]	14,3	-	-
heavy metals (quantification according ISO 17294-2: 2016)					
Chromium (db)	ISO 16968:2015	[mg/kg]	<1,0	≤ 10	≤ 10
Copper (db)	ISO 16968:2015	[mg/kg]	1,4	≤ 10	≤ 10
Zinc (db)	ISO 16968:2015	[mg/kg]	5,9	≤ 100	≤ 100
Lead (db)	ISO 16968:2015	[mg/kg]	7,0	≤ 10	≤ 10
Mercury (db)	ISO 16968:2015	[mg/kg]	< 0,075	≤ 0,1	≤ 0,1
Cadmium (db)	ISO 16968:2015	[mg/kg]	<0,10	≤ 0,5	≤ 0,5
Arsenic (db)	ISO 16968:2015	[mg/kg]	<0,50	≤ 1	≤ 1
Nickel (db)	ISO 16968:2015	[mg/kg]	<1,0	≤ 10	≤ 10
ash melting behaviour (ash preparation at 815°C, measurement at oxidizing atmosphere)					
shrinking temperature SST	CEN/TS 15370-1:2006	[°C]	1230	-	-
deformation temperature DT	CEN/TS 15370-1:2006	[°C]	1430	≥ 1200	≥ 1200
hemisphere temperature HT	CEN/TS 15370-1:2006	[°C]	>1550	-	-
flow temperature FT	CEN/TS 15370-1:2006	[°C]	>1550	-	-

db... dry basis; ar... as received

¹⁾ 1% at factory gate or when loading truck for delivery to end-users, 0,5% when filling pellets bags/sealed big bag



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Accredited inspection body


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