eurofins | Umwelt

EUROFINS Umwelt Ost GmbH · Niederlassung Freiberg
OT Tuttendorf, Gewerbepark "Schwarze Kiefern" · D-09633 Halsbrücke

AENOR
Cl Genova 6

28004 Madrid
SPANIEN

Title:	**Test report to order 11409013**
Test report:	**No. 1008328032**
Project:	**No. 1008328**
Title of project:	**AENOR REF. 0037356, PALETS J. MARTORELL, S.A.**
Number of samples:	**1 sample**
Sample type:	**biofuel, solid**
Sampler:	**unknown**
Receipt of samples:	**2014-07-10**
Test period:	**2014-07-10 - 2014-07-17**

The test results refer solely to the analysed test specimen. Unless the sampling was done by our laboratory or in our sub-order the responsibility for the correctness of the sampling is disclaimed. This test report is only valid with signature and may only be further published completely and unchanged. Extracts or changes require the authorisation of the EUROFINS UMWELT in each individual case.

Our General Terms & Conditions of Sale (GTCS) are applicable, as far as no specific agreements do exist.
The GTCS are available on http://www.eurofins.de/umwelt/avb.aspx.

Accredited test laboratory according to DIN EN ISO/IEC 17025 notification under the DAkkS German Accreditation System *for Testing. The accreditation shall apply for the tests listed in the certificate.*

Freiberg, 2014-07-17

Dipl.-Chem. A. Ulbricht
Head of Laboratory

DAkkS Deutsche Akkreditierungsstelle D-PL-14081-01-00

Project: AENOR REF. 0037356, PALETS J. MARTORELL, S.A.

Analysis according to EN plus edition January 2012						Sample designation	AENOR REF.
			limits			Lab-ID#	114047106
Parameter	Unit	LOQ	EN Plus-A1	EN Plus-A2	EN Plus-B	Method	
Quality characteristics							
diameter, D	mm		D06 6±1 D08 8±1	D06 6±1 D08 8±1	D06 6±1 D08 8±1	DIN EN 16127	6,1
length, L	mm		3,15 ≤ L ≤ 40	3,15 ≤ L ≤ 40	3,15 ≤ L ≤ 40	DIN EN 16127	according
water content, M	% w/w anl	0,1	M10 ≤ 10	M10 ≤ 10	M10 ≤ 10	DIN EN 14774-2	5,6
ash content, A (550°C)	% w/w wf	0,1	A0.7 ≤ 0,7	A1.5 ≤ 1,5	A3.0 ≤ 3,0	DIN EN 14775	0,36
mechanical durability, DU	% w/w anl		DU97.5 ≥ 97,5	DU97.5 ≥ 97,5	DU96.5 ≥ 96,5	DIN EN 15210-1	99,3
fine portion, F (< 3,15 mm)	% w/w anl	0,1	F1,0 < 1,0	F1,0 < 1,0	F1,0 < 1,0	DIN EN 15149-2	< 0,1
additive	% w/w anl		< 2 % (w/w) , sort and amount must be specified			information was given by client	no information
bulk density, BD	kg/m³ anl		BD 600 ≥ 600	BD 600 ≥ 600	BD 600 ≥ 600	DIN EN 15103	700
net calorific value, Q (H u,p)	MJ/kg anl	0,2	16,5 ≤ Q ≤ 19	16,3 ≤ Q ≤ 19	16,0 ≤ Q ≤ 19	DIN EN 14918	18,02
nitrogen total, N	% w/w wf	0,05	N0.3 ≤ 0,3	N0.5 ≤ 0,5	N1.0 ≤ 1,0	DIN EN 15104	0,06
sulfur total, S	% w/w wf	0,005	S0.03 ≤ 0,03	S0.03 ≤ 0,03	S0.04 ≤ 0,04	DIN EN 15289	0,008
chlorine total, Cl	% w/w wf	0,005	Cl0.02 ≤ 0,02	Cl0.02 ≤ 0,02	Cl0.03 ≤ 0,03	DIN EN 15289	< 0,005
Determination of minor elements from the microwave digestion according to DIN EN 15297							
arsenic, As	mg/kg wf	0,8	≤ 1	≤ 1	≤ 1	DIN EN ISO 17294-2	< 0,8
lead, Pb	mg/kg wf	2	≤ 10	≤ 10	≤ 10	DIN EN ISO 17294-2	< 2
cadmium, Cd	mg/kg wf	0,2	≤ 0,5	≤ 0,5	≤ 0,5	DIN EN ISO 17294-2	< 0,2
chromium total, Cr	mg/kg wf	1	≤ 10	≤ 10	≤ 10	DIN EN ISO 17294-2	< 1
copper, Cu	mg/kg wf	1	≤ 10	≤ 10	≤ 10	DIN EN ISO 17294-2	< 1
nickel, Ni	mg/kg wf	1	≤ 10	≤ 10	≤ 10	DIN EN ISO 17294-2	< 1
mercury, Hg	mg/kg wf	0,07	≤ 0,1	≤ 0,1	≤ 0,1	DIN EN 1483	< 0,07
zinc, Zn	mg/kg wf	1	≤ 100	≤ 100	≤ 100	DIN EN ISO 17294-2	7

Project: AENOR REF. 0037356, PALETS J. MARTORELL, S.A.

Analysis according to EN plus edition January 2012						Sample designation	AENOR REF.
			limits			Lab-ID#	114047106
Parameter	**Unit**	**LOQ**	**EN Plus-A1**	**EN Plus-A2**	**EN Plus-B**	**Method**	
Ash melting behaviour (oxidizing atmosphere) on ash 815°C							
shrinkage start temperature, SST	°C		can be given	can be given	can be given	analogue DIN CEN/TS 15370-1	1080
deformation temperature, DT	°C		≥ 1200	≥ 1100	≥ 1100	analogue DIN CEN/TS 15370-1	1450
hemisphere temparature, HT	°C		can be given	can be given	can be given	analogue DIN CEN/TS 15370-1	>1500
flow temperature, FT	°C		can be given	can be given	can be given	analogue DIN CEN/TS 15370-1	>1500

Annotation:
length: up to 1 % of pellets can be longer than 40mm. Maximum length should be <45mm.
Hu,p: net calorific value at constant pressure

anl: as received
wf: water free basis
–
EUROFINS UMWELT is not liable for acuracy of the cited limits.

PALETS J. MARTORELL, S.A.

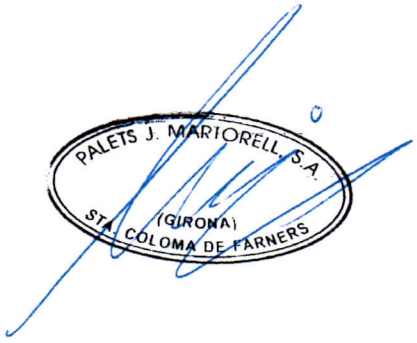
CTRA. DE GIRONA, KM.19 - APARTAT DE CORREUS: 30
17430 SANTA COLOMA DE FARNERS /GIRONA/

La marca Pellet Farners, propiedad de la empresa Palets J.Martorell S.A. que está certificada bajo la Norma ENplus-A1 con el número de identificación ES-018, cumple con las especificaciones ENplus-A1 que se detallan en el cuadro que precede (señalado en color amarillo).

Tabla 1 Valores límites para los parámetros más importantes de los pellets. Se pueden encontrar más parametros en la norma EN 14961-2.

Parámetro	Unid.s	ENplus-A1	ENplus-A2	EN-B	Norma de ensayo
Diámetro	mm	6 or 8			EN-16127
Longitud	mm	3.15 ≤ L ≤ 40 [3]			EN-16127
Humedad	p-% [1]	≤ 10			EN-14774-1
Cenizas	p-% [2]	≤ 0.7	≤ 1.5	≤ 3.0	EN-14775 (550 °C)
Durabilidad mecánica	p-% [1]	≥ 97,5 [4]		≥ 96.5 [4]	EN-15210-1
Finos (< 3.15 mm)	p-% [1]	<1			EN-15210-1
Poder Calorífico Inferior	MJ/kg [1]	16,5≤Q≤19	16,3≤Q≤19	16,0≤Q≤19	EN-14918
Densidad aparente	kg/m³	≥ 600			EN-15103
Nitrogeno	p-% [2]	≤ 0.3	≤ 0.5	≤ 1.0	EN-15104
Sulfur content	p-% [2]	≤ 0.03		≤ 0.04	EN-15289
Cloro	p-% [2]	≤ 0.02		≤ 0.03	EN-15289
Fusibilidad cenizas [4]	°C	≥ 1200	≥ 1100		EN-15370

1) Base húmeda 2) Base seca
3) Un máximo de 1 p-% de los pellets pueden ser más largos de 40 mm, no se permiten pellets > 45 mm
4) Temperatura de Deformación, preparación de la muestra a 815 °C



Lluis Albó - Responsable de Calidad
Santa Coloma de Farners, 26 de Septiembre de 2014.