



МОРСКОЕ ГРУЗОВОЕ БЮРО MARINE CARGO BUREAU

Quality Management System is Certified in Compliance with ISO 9001:2015

Национальная признанная организация по безопасности морской транспортировки грузов



National Recognized Organization on the Safe Carriage of Cargoes by Sea

MCB TEST LABORATORY

RECOGNITION CERTIFICATE No. 21.13374.382 dated March 22, 2021

CERTIFICATE OF EVALUATION No. MCB-TL.116.22.CAWP

Chemical/physical analyses of wood pellets

This is certify, at request of "PLYTERRA", JSC the Test laboratory of "MARINE CARGO BUREAU" have performed Determination of analyses on the sample of below-mentioned commodity:

Description of cargo: Wood pellets, Ø6mm
 Manufacturer: PLYTERRA, JSC
 Sample represents: Representative sample
 Date and time of testing: September 26-30, 2022
 Testing site: Saint-Petersburg, Russia

PRECORD MEASUREMENT:

| PARAMETER | METHOD | AS RECEIVED BASIS | DRY BASIS |
|--|-------------|-------------------|-----------|
| TOTAL MOISTURE, % | EN 14774-1 | 7,1 | ----- |
| ASH, % | EN 14775 | 0,46 | 0,49 |
| GROSS CALORIFIC VALUE, kcal/kg GJ/t | EN 14918 | 4345 | 4677 |
| | | 18,19 | 19,58 |
| NET CALORIFIC VALUE, kcal/kg (constant pressure, CP) GJ/t | EN 14918 | 4006 | 4354 |
| | | 16,77 | 18,23 |
| VOLATILE MATTER, % | EN 15148 | 80,3 | 86,4 |
| SULPHUR (S), % | ISO 16994 | 0,009 | 0,010 |
| CHLORINE (CL), % | ISO 16994 | 0,009 | 0,010 |
| NITROGEN (N), % | ISO 16948 | 0,12 | 0,13 |
| MECHANICAL DURABILITY, % | ISO 17831-1 | 99,0 | ----- |
| BULK DENSITY, kg/m ³ | EN 15103 | 663 | ----- |
| Ash fusion temperatures in oxidizing atmosphere: | | | |
| SHRINKAGE STARTING (SST), °C | ISO 21404 | 1400 | |
| DEFORMATION (DT), °C | | 1440 | |
| HEMISPHERE (HT), °C | | 1460 | |
| FLOW (FT), °C | | 1480 | |

Deputy director
 "MARINE CARGO BUREAU"
 Anatoly Fedorov
 September 30, 2022.

