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TEST REPORT No. 281201

Place and date of issue: Bellaria-Igea Marina - Italy, 15/04/2011

Customer: C. & P. COSTRUZIONI S.r.l. - Via d'Este, 5/7 - 5/8 - 42028 POVIGLIO (RE) - Italy

Date test requested: 07/12/2010

Order number and date: 51144, 09/12/2010

Date sample received: 15/02/2011

Test date: from 24/02/2011 to 01/04/2011

Purpose of test: determination of physicomechanical properties of wood-chip concrete shuttering blocks in accordance with standard UNI EN 15498

Test site: Istituto Giordano S.p.A. - Blocco 8 - Via del Lavoro, 1 - 47814 Bellaria-Igea Marina (RN) - Italy

Sample origin: sampled and supplied by the Customer

Identification of sample received: No. 2011/0294

Description of sample*

The test sample is a wood-chip concrete shuttering block of dimensions 50 × 30 × 25 cm and approx. weight 12 kg.

Normative References

Tests were carried out according to the requirements of the following standards:

- UNI EN 15498:2008 dated 11/09/2008 "Precast concrete products. Wood-chip concrete shuttering blocks - Product properties and performance";
- UNI EN 772-14:2003 dated 31/01/2003 "Methods of test for masonry units. Determination of moisture movement of aggregate concrete and manufactured stone masonry units".

(*) according to that stated by the Customer.

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Test method

The sample was tested to determine moisture movement.

Determination of moisture movement

The test involves measuring the expansion between the initial condition and after soaking in water and determination of the shrinkage between the initial condition and after drying for 21 days in an oven at 33 °C.

Test results

Moisture movement

Measurement of expansion after soaking in water for 4 days			
Specimen [No.]	Weight at time of initial measurement [g]	Moisture expansion coefficient	
		Individual value "$\Delta l_{gi}/l$" [mm/m]	Mean value "$\Delta l_g/l$" [mm/m]
5	4114	0,178	0,202
3	3912	0,215	
1	3642	0,213	

Measurement of shrinkage after drying for 21 days					
Specimen [No.]	Weight at time of initial measurement "$m_{0,s}$" [g]	Moisture content after drying		Shrinkage coefficient after drying	
		Individual value "W_s" [%]	Mean value [%]	Individual value "$\Delta l_{ri}/l$" [mm/m]	Mean value "$\Delta l_r/l$" [mm/m]
6	4127	6,75	5,91	0,298	0,355
4	3985	5,84		0,442	
2	3788	5,13		0,326	

Calculated total movement coefficient "$\Delta l_c/l$"* [mm/m]	0,557

$$(*)\ \frac{\Delta l_c}{l} = \frac{\Delta l_r}{l} + \frac{\Delta l_g}{l}$$

Test Technician:
Per. Ind. Oberdan Savini

Head of Building Materials Laboratory:
Dott. Geol. Gianluca Ferraiolo

Chief Executive Officer
(Dott. Arch. Sara Lorenza Giordano)

Firmato digitalmente da GIORDANO SARA LORENZA