

Client: Lignaconstruct GmbH

BIO-XLAM - determination of shear stiffness and shear modulus

Data source: Test Report CNR IVALLSA N. 2092-17/06/2013

Date: 22.04.2016

Test specimen	d	l	h	D <sub>xy</sub>	(GA) <sub>ef</sub>	G* <sub>xy</sub>
	[mm]	[mm]	[mm]	[N]	[N/m]	[N/mm <sup>2</sup> ]
LPM-07/2013-001 push	200	2950	2950	12.777.942	<b>4.331.506</b>	<b>21,66</b>
LPM-07/2013-001 pull	200	2950	2950	11.309.386	<b>3.833.690</b>	<b>19,17</b>
LPM-07/2013-002 push	200	2950	2950	15.521.665	<b>5.261.581</b>	<b>26,31</b>
LPM-07/2013-002 pull	200	2950	2950	12.699.322	<b>4.304.855</b>	<b>21,52</b>

<b>mean</b>	<b>13.077.079</b>	<b>4.432.908</b>	<b>22,16</b>
SD	1.763.795	597.897	2,99
CV	13,49%	13,49%	13,49%
X <sub>5%</sub>	10.175.635	3.449.368	17,25

Test specimen	d	l	h	D <sub>xy</sub>	(GA) <sub>ef</sub>	G* <sub>xy</sub>
	[mm]	[mm]	[mm]	[N]	[N/m]	[N/mm <sup>2</sup> ]
LPM-07/2013-003 push	142,5	2950	2950	8.658.374	<b>2.935.042</b>	<b>20,60</b>
LPM-07/2013-003 pull	142,5	2950	2950	7.768.697	<b>2.633.457</b>	<b>18,48</b>
LPM-07/2013-004 push	142,5	2950	2950	11.517.665	<b>3.904.293</b>	<b>27,40</b>
LPM-07/2013-004 pull	142,5	2950	2950	11.293.134	<b>3.828.181</b>	<b>26,86</b>

<b>mean</b>	<b>9.809.468</b>	<b>3.325.243</b>	<b>23,34</b>
SD	1.880.511	637.461	4,47
CV	19,17%	19,17%	19,17%
X <sub>5%</sub>	6.716.026	2.276.619	15,98

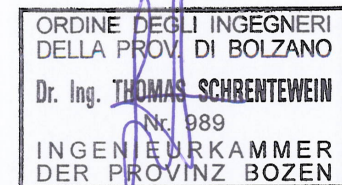
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**D<sub>xy</sub>** In-plane shear stiffness, Rigidezza a taglio nel piano, Scheibenschubsteifigkeit

**(GA)<sub>ef</sub>** Effective shear stiffness per [m], Rigidezza a taglio per unità di lunghezza [m], wirksame Schubsteifigkeit je [m] Wandlänge

**G\*<sub>xy</sub>** In-plane shear modulus, Modulo di taglio nel piano, Scheibenschubmodul