

## Product properties PlatoWood Norway spruce

			PLATO	Literature**	Reference
			Norway spruce	non-treated	
<b>Physical properties</b>					
Density*	kg/m3	EN 5461	421	460	SHR report 2,793-2w (2003)
Stdev	kg/m3		40		
Moisture content	%		5.0	12	
Equilibrium moisture content 65% RH*	%	SWV_SHR 047	6.0	13.0	SHR report 2,793-2w (2003)
Equilibrium moisture content 90% RH	%		9.8	19.5	SHR report 2,793-2w (2003)
Equilibrium moisture content 95% RH	%		11.5		SHR report 20,011 (2000)
Radial shrinkage saturated -> 65% RH*	%	SWV_SHR 049	1.0	1.9	SHR report 2,793-2w (2003)
Tangential shrinkage saturated -> 65% RH*	%	SWV_SHR 049	1.8	4.5	SHR report 2,793-2w (2003)
Radial shrinkage 65% RH -> ovendry*	%	SWV_SHR 049	1.0		
Tangential shrinkage 65% RH -> ovendry*	%	SWV_SHR 049	1.7		
Radial shrinkage saturated -> ovendry*	%	SWV_SHR 049	1.9	3.7	SHR report 2,793-2w (2003)
Tangential shrinkage saturated -> ovendry*	%	SWV_SHR 049	3.5	8.0	SHR report 2,793-2w (2003)
<b>Mechanical properties</b>					
Moisture content before testing	%		5	12	
Bending strength (MOR)*	N/mm2	EN 408	79	77	SHR report 2,793-1w (2003)
Stdev	N/mm2		19		
Modulus of elasticity (MOE)*	N/mm2	EN 408	10514	10800	SHR report 2,793-1w (2003)
Stdev	N/mm2		2665		
Janka-hardness radial*	N	ASTM D143-94	1990	1570	SHR report 2,793-1w (2003)
Stdev	N		354		
Janka-hardness tangential*	N	ASTM D143-94	1905	1570	SHR report 2,793-1w (2003)
Stdev	N		280		
Janka-hardness perpendicular to the grain*	N	ASTM D143-94	3440	2650	SHR report 2,793-1w (2003)
Stdev	N		463		
<b>Durability</b>					
Kolleflask test		EN113	1	4	SHR report 20,011 (2000)
Graveyard test		EN252	Ongoing***		SHR report 2,552

\* 15 boards tested, taken from 3 different production batches (Russian origin)

\*\* Houtvadecum, S.I. Winselius, ten Hagen & Stam uitgevers Den Haag, ISBN 90 440 02171

\*\*\* In 1998 a graveyard test was started including PlatoWood Norway spruce

### SHR reports:

**20.011** (19-04-2000) Status report: consideration of properties and applications of Plato-wood

**2.552** (01-12-2004) De beproeving van verschillende soorten Plato-hout volgens de EN 252

**2.793-1w** (26-11-2003) Bepaling van de buigsterkte, de elasticiteitsmodulus en de Janka-hardheid van Plato behandeld vuren ten behoeve van de BRL 0605 Houtmodificatie

**2.793-2w** (26-11-2003) Bepaling van de volumieke massa, het evenwichtsvochtgehalte en de krimp van Plato