

**BESGRADE PRODUCTS SDN BHD****DECLARATION OF PERFORMANCE****NO : 1602-1016(NPI/BG-1975)**

Manufacturer :Besgrade Products Sdn Bhd, Batu 10, Jalan Pokok Sena, Mukim Jabi, 06400 Alor Setar, Kedah, Malaysia.

Assessment and verification of consistency of performance (AVCP) system : CE 4 System

Product description : PLYWOOD | Glue : Phenol Formaldehyde

Product type for the intended use of:

- General plywood in external conditions (EN 636-3 (G))
- General plywood in internal humid conditions (EN 636-2 (G))
- General plywood in internal dry conditions (EN636-1 (G))

Declared Performance

Essential characteristics		Unit	Performance			Harmonised technical specification
Thickness range			5.5mm	15mm	21mm	
Bending strength	Fm 0	N/mm ²	36.10	30.66	28.28	EN310:1993
	Fm 90	N/mm ²	51.47	33.92	49.37	
Bending stiffness	Em 0	N/mm ²	5673	4362	4116	EN310:1993
	Em 90	N/mm ²	4267	6289	6177	
Bonding quality		Class	3-ext	3-ext	3-ext	EN314-1:1993,EN314-2:1993
Durability (swelling in thickness)		-	NPD	NPD	NPD	-
Durability (moisture resistance)		-	NPD	NPD	NPD	-
Moisture content		%	11.0	10.4	10.3	EN322:1993
Release of formaldehyde		-	E1	E1	E1	EN13986 annex B
Reaction to fire		Class	NPD	NPD	NPD	EN13986 : 2004
Water vapour permeability		Wet cup	70u	90u	70u	EN13986 : 2004
Water vapour permeability		Dry cup	200u	220u	200u	EN13986 : 2004
Airborne sound insulation		-	NPD	NPD	NPD	-
Sound absorption		-	NPD	NPD	NPD	-
Thermal conductivity		W/(m.k)	0.13	0.17	0.13	EN13986 : 2004
Strength and stiffness for structural use		-	NPD	NPD	NPD	-
		-	NPD	NPD	NPD	
Impact resistance for structural use		-	NPD	NPD	NPD	-
		-	NPD	NPD	NPD	
Strength and stiffness under point load for structural use ^b		-	NPD	NPD	NPD	-
		-	NPD	NPD	NPD	
Mechanically durability		-	NPD	NPD	NPD	-
Biological durability		-	NPD	NPD	NPD	-
Content of pentachlorophenol		-	NPD	NPD	NPD	-

EN 13986 : 2004

a For end uses in humid conditions only*b* For structural floor and roof decking on joists only

NPD : Non Performance Determined

Note: Values calculated on the lowest 5th percentile

*The performance of the products identified is in accordance with the declared performance above**This declaration of performance is issued under the sole responsibility of the manufacturer identified above*

Signed on behalf of the manufacturer by:

(Name and Function)

Date :20/10/2016

LABORATORY REPRESENTATIVE



BESGRADE PRODUCTS SDN BHD

DECLARATION OF PERFORMANCE

NO : 1602-1016(NPI/BG-1975)

Manufacturer : Besgrade Products Sdn Bhd, Batu 10, Jalan Pokok Sena, Mukim Jabi, 06400 Alor Setar, Kedah, Malaysia.

Assessment and verification of consistency of performance (AVCP) system : CE 2+ System

Product description : PLYWOOD

Glue : Phenol Formaldehyde

Product type for the intended use of:

Structural plywood for floor and roof decking on joists as well as wall sheathing on studs for internal dry, internal humid, and exterior conditions

Notify Body company :
BM TRADA

Structural plywood in external conditions (EN 636-3 (S))

Notify Body Identification number :
1224-CPR-0087

Structural plywood in internal humid conditions (EN 636-2 (S))

Structural plywood in internal dry conditions (EN636-1 (S))

Declared Performance

Essential characteristics		Unit	Performance			Harmonised technical specification
Thickness range			9mm	12mm	18mm	
Bending strength	Fm 0	N/mm ²	36.60	20.38	34.33	EN310:1993
	Fm 90	N/mm ²	76.97	41.50	27.94	
Bending stiffness	Em 0	N/mm ²	4516	2924	4527	EN310:1993
	Em 90	N/mm ²	7541	4816	3492	
Bonding quality		Class	3-ext	3-ext	3-ext	EN314-1:1993,EN314-2:1993
Durability (swelling in thickness)		-	NPD	NPD	NPD	-
Durability (moisture resistance)		-	NPD	NPD	NPD	-
Moisture content		%	10.7	11.2	10.7	EN322:1993
Release of formaldehyde		-	E1	E1	E1	EN13986 annex B
Reaction to fire		Class	D-s2,d0	D-s2,d0	D-s2,d0	EN13986 : 2004
Water vapour permeability		Wet cup	70u	70u	70u	EN13986 : 2004
Water vapour permeability		Dry cup	200u	200u	200u	EN13986 : 2004
Airborne sound insulation		-	NPD	NPD	NPD	-
Sound absorption		-	NPD	NPD	NPD	-
Thermal conductivity		W/(m.k)	0.13	0.13	0.13	EN13986 : 2004
Strength and stiffness for structural use		-	NPD	NPD	NPD	-
Impact resistance for structural use		-	NPD	NPD	NPD	-
Strength and stiffness under point load for structural use (Floor)	F _{max}	kN	2.95	3.86	7.58	EN1195 : 1998
	R _{0.5}	N/mm ²	115	101	329	
Strength and stiffness under point load for structural use (Roof)	F _{max}	kN	4.37	5.45	10.72	EN12871 : 2001
	R _{0.5}	N/mm ²	91	173	280	
Mechanically durability		-	NPD	NPD	NPD	-
Biological durability		-	NPD	NPD	NPD	-
Content of pentachlorophenol		-	NPD	NPD	NPD	-
a For end uses in humid conditions only			F _{max} - The 5% characteristic for maximum load			
b For structural floor and roof decking on joists only			R _{0.5} - The 5% characteristic for stiffness			
NPD : Non Performance Determined						
Note: Values calculated on the lowest 5th percentile						

EN 13986 : 2004

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