

## Appendix C

### Test Reports for Panel Boards Used as Wall and Floor of PBUs

Product Name :
Type of Board :
Density (kg/m <sup>3</sup> ) :

#### Instructions

1. Unless otherwise stated, please conduct and submit test reports according to the test standards listed below.
2. All test reports shall be the original or certified true copies issued by local or overseas laboratories accredited to ISO/IEC 17025, SAC-SINGLAS and SAC-MRA<sup>1</sup> within last 60 months.
3. The manufacturer of the panel boards used in the PBU system shall establish a Quality Management System certified according to EN ISO 9001.

S/N	Test Standard	Criteria/Remarks
<b>A Strength Performance</b>		
1.	<u>SS492:2001</u> Specification for performance requirements for strength and robustness (including methods of test) for partition walls	To achieve a grade of Medium Duty (MD) and above
<b>B Thermal Properties</b>		
2.	<u>BS 476 Part 21: 1987*</u> Fire tests on building materials and structures. Methods for determination of the fire resistance of loadbearing elements of construction	*Only applicable for single-slab PBU system
3.	<u>BS 476 Part 22: 1987*</u> Fire tests on building materials and structures. Method for determination of the fire resistance of non-loadbearing elements of construction	*Only applicable for PBU wall system which is also used as party wall or compartment wall
4.	<u>BS 476 Part 4: 1970</u> Fire tests on building materials and structures. Non-combustibility test for materials	Non-combustible
5.	<u>EN 13501-1: 2007 +A1: 2009</u> Fire classification of construction products and building elements. Classification using test data from reaction to fire tests	
<b>C Acoustic Properties</b>		
6.	<u>ASTM E90: 2004</u> Standard test method for laboratory measurement of airborne sound transmission loss of building partitions and elements	
<b>D Green Label and Mold Resistance</b>		
7.	<u>Singapore Green Building Product Labelling Scheme (SGBPLS)</u> Category: Panel Board	Panel board used in the PBU system must be certified under SGBPLS
8.	<u>ASTM D3273 – 12*</u> Standard test method for resistance to growth of mold on the surface of interior coatings in an environmental chamber	To achieve a rating of 9 and above  *Test to be conducted on uncoated panel boards (e.g.

S/N	Test Standard	Criteria/Remarks
		without water proofing, paint, tiles etc)
<b>E</b>	<b>Physical and Moisture Related Properties</b>	
9.	<u>BS EN 12467: 2012*</u> Fibre-cement flat sheets – Product specification and test methods	*Test standards and requirements to adopt <b>Category A</b> unless otherwise stated
	a) Flexural strength (Bending strength)	
	b) Moisture movement	Value of moisture movement to achieve $\leq 0.07\%$
	c) Water impermeability*	*For panel boards used as floor panels within the PBU system, please adopt a water height of 50mm above the sample panel board during the test
	d) Warm water*	* Please adopt a water bath in excess of lime for this test
	e) Heat-rain*	*Test to be conducted on uncoated panel boards (e.g. without water proofing, paint, tiles etc) for 50 cycles. Any additional material which appears on the back panel surface during the test should be sampled and tested for identification purpose
	f) Soak-dry*	*Test to be conducted on uncoated panel boards (e.g. without water proofing, paint, tiles etc) for 50 cycles
10.	<u>BS EN 317:1993</u> Particleboards and fibreboards – Determination of swelling in thickness after immersion in water	Swelling in thickness to achieve $\leq 1.5\%$

Note

<sup>1</sup> Singapore Accreditation Council (SAC) signs bilateral Mutual Recognition Arrangement (MRA) with other national accreditation bodies. It is a signatory to the International Laboratory Accreditation Cooperation (ILAC) Arrangement and regional cooperation bodies such as the Asia Pacific Laboratory Accreditation (APLAC).