Classification Report No. 7191141775-MEC16/3-LGJ
dated 15 Jul 2016

PSB Singapore

Choose certainty.
Add value.

Note: This report is issued subject to the Testing and Certification Regulations of the TÜV SÜD Group and the General Terms and Conditions of Business of TÜV SÜD PSB Pte Ltd. In addition, this report is governed by the terms set out within this report.

CLASSIFICATION OF REACTION TO FIRE IN ACCORDANCE WITH BS EN 13501-1:2007 +A1: 2009

Sponsor : Munkong Steel Co., Ltd
1/348 Soi.Onnuch 59/1, Sukhumvit 77 Rd
Prawet, Bangkok
Thailand 10250

Prepared by: TÜV SÜD PSB Pte Ltd

Product name: 'MKS PIR100' MKS PIR sandwich insulation panel (nominally 100mm thick, 125kg/m^3) with 0.5mm thick steel facings

This classification report consists of five pages and may only be used or reproduced in its entirety.

TÜV SÜD PSB

ilac-MRA

ACCREDITED LABORATORY SAC-SINGLAS

LA-2007-0380-A
LA-2007-0381-F
LA-2007-0382-B
LA-2007-0383-G
LA-2007-0384-G
LA-2007-0385-E
LA-2007-0386-C
LA-2010-0464-D

The results reported herein have been performed in accordance with the terms of accreditation under the Singapore Accreditation Council. Inspections/Calibrations/Tests marked "Not SAC-SINGLAS Accredited" in this Report are not included in the SAC-SINGLAS Accreditation Schedule for our inspection body/laboratory.

Laboratory:
TÜV SÜD PSB Pte. Ltd.
No.1 Science Park Drive
Singapore 118221

Phone : +65-6885 1333
Fax : +65-6776 8670
E-mail: enquiries@tuv-sud-psb.sg
www.tuv-sud-psb.sg
Co. Reg : 199002667R

Regional Head Office:
TÜV SÜD Asia Pacific Pte. Ltd.
1 Science Park Drive, #02-01
Singapore 118221

1. Introduction

This classification report defines the classification assigned to 'MKS PIR100' MKS PIR sandwich insulation panel (nominally 100mm thick, 125kg/m^3) with 0.5mm thick steel facings in accordance with the procedures given in BS EN 13501-1: 2007+A1:2009.

2. Details of classified product

2.1. End use application

The product is to be used for cold and clean room material, processing room material, building construction insulation and fire stopping material.

2.2. Product description

The product is fully described in the test reports in support of this classification listed in clause 3.1

3. Test reports and results in support of classification

3.1 Test reports

Name of laboratory	Name of sponsor	Test report reference	Test method
TÜV SÜD PSB Pte Ltd	Munkong Steel Co., Ltd	7191141775-MEC16/1-JV dated 11 Jul 2016	BS EN 13823: 2010
TÜV SÜD PSB Pte Ltd	Munkong Steel Co., Ltd	7191141775-MEC16/2-JV dated 11 Jul 2016	BS EN ISO 11925-2: 2010

Test method	Parameters	Number of tests	Test results	
			Measured parameters (mean values)	Compliance parameters for B-s2,d0
BS EN 13823	$FIGRA_{0.2MJ}$ (W/s)	3	24.8	≤ 120
	$FIGRA_{0.4MJ}$ (W/s)		24.8	
	THR_{600s} (MJ)		3.1	≤ 7.5
	LFS to edge (Yes / No)		No	No
	SMOGRA (m^2/s^2)		6.8	≤ 180
	TSP_{600s} (m^2)		90.3	≤ 200
	Flaming Droplets / Particles (sec)		No	No
BS EN ISO 11925-2: 2010	Vertical flame spread (surface) (mm)	6	0.0	F_s ≤ 150mm within 60 sec
	Vertical flame spread (edge) (mm)	6	0.0	

"*" – denotes threshold not reached

4. Classification and field of application

4.1. Reference of classification

This classification has been carried out in accordance with clause 11 of BS EN 13501-1: 2007 +A1: 2009.

4.2. Classification

The product, 'MKS PIR100' MKS PIR sandwich insulation panel (nominally 100mm thick, 125kg/m^3) with 0.5mm thick steel facings, in relation to its reaction to fire behaviour meets the requirements to be classified as **B.**

The additional classification in relation to smoke production is: **s2**

The additional classification in relation to flaming droplets / particles is: **d0**

Fire behaviour		Smoke production			Flaming droplets	
B	**-**	**s**	**2**	**,**	**d**	**0**

Therefore, the classification of 'MKS PIR100' MKS PIR sandwich insulation panel (nominally 100mm thick, 125kg/m^3) with 0.5mm thick steel facings, in accordance with BS EN 13501-1: 2007 +A1:2009 is:

Reaction to fire classification: B-s2,d0

4.3. End use application and product parameter

The classification in clause 4.2 only applies to the product described in clause 2 of this report and is only valid for the following parameters and applications:

- Cold and Clean Room Material
- Processing Room Material
- Building Construction Insulation
- Fire Stopping Material

5.0 Limitation

This classification document does not represent type approval or certification of the product.

Leong Gene-Jhou
Senior Associate Engineer

Joseph Chng
Assistant Vice President
(Fire Property)
Mechanical

PSB Singapore

Please note that this Report is issued under the following terms:

1. This report applies to the sample of the specific product/equipment given at the time of its testing/calibration. The results are not used to indicate or imply that they are applicable to other similar items. In addition, such results must not be used to indicate or imply that TÜV SÜD PSB approves, recommends or endorses the manufacturer, supplier or user of such product/equipment, or that TÜV SÜD PSB in any way "guarantees" the later performance of the product/equipment. Unless otherwise stated in this report, no tests were conducted to determine long term effects of using the specific product/equipment.

2. The sample/s mentioned in this report is/are submitted/supplied/manufactured by the Client. TÜV SÜD PSB therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture, consignment or any information supplied.

3. Nothing in this report shall be interpreted to mean that TÜV SÜD PSB has verified or ascertained any endorsement or marks from any other testing authority or bodies that may be found on that sample.

4. This report shall not be reproduced wholly or in parts and no reference shall be made by the Client to TÜV SÜD PSB or to the report or results furnished by TÜV SÜD PSB in any advertisements or sales promotion.

5. Unless otherwise stated, the tests were carried out in TÜV SÜD PSB Pte Ltd, No.1 Science Park Drive Singapore 118221.

July 2011