

Date : 21 January 2019

Our Ref: CD/FSSD/12/02/03/01

Registrar, Board of Architects
Registrar, Professional Engineers Board
President, Singapore Institute of Architects
President, Institution of Engineers, Singapore
President, Association of Consulting Engineers, Singapore

Dear Sir/Madam,

ADVISORY ON THE USE OF EXTERNAL WALL FINISHES ON FACADE OF BUILDINGS

We refer to SCDF's circular, "Advisory on the Use of Claddings on External Walls of Buildings" dated 25 August 2017 (see Annex A).

2. All Qualified Persons (QP) and Registered Inspectors (RI) are reminded to check and ensure that all composite panels used as cladding on the external walls of buildings in their projects comply with the requirements stated in the said circular.
3. In addition to the above, SCDF has recently reviewed the regulatory regime for the use of cladding in Singapore, and has tightened its policies, regulation and certification processes (see Annex B). Moving forward, QPs and RIs will play an even more important role in ensuring the robustness of this regulatory regime, which in turn ensures that the buildings in Singapore are fire-safe. In this regard, any QP or RI who suspects that non-compliant cladding has been installed in any project under their purview should notify SCDF immediately.
4. Please convey the contents of this circular to members of your Board/ Institution/ Association. This circular is also available in CORENET-e-Info: <http://www.corenet.gov.sg/einfo>. For any clarification, please contact MAJ Tan Chung Yee at DID: 68481457.



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Yours faithfully

(transmitted via email)

MAJ Tan Chung Yee
for Commissioner
Singapore Civil Defence Force

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ANNEX A

Your Ref : **Our Ref: CD/FSSD/12/02/03/01**

Date : 25 Aug 2017

Registrar, Board of Architects
Registrar, Professional Engineers Board
President, Singapore Institute of Architects
President, Institution of Engineers, Singapore
President, Association of Consulting Engineers, Singapore

IMMEDIATE

Dear Sir/Mdm

ADVISORY ON THE USE OF CLADDINGS ON EXTERNAL WALLS OF BUILDINGS

On 6 Feb 2017, SCDF issued a circular on the “Fire Safety Guidelines (2017) for Certification of Fire Safety Products/Materials” to the building industry. Annex A of the circular provides a list of regulated fire safety products with their acceptable test standard(s), product certification scheme and the surveillance regime.

2. This circular serves to remind QPs on the tests required for composite panels used as claddings on external walls of buildings. The permitted test standard(s) are as follows:

Usage of composite panel	Test standard(s)	Acceptance Criteria	Remarks
Cladding on external wall	BS 476 Part 4; or	Meet the criteria stipulated in BS 476 Part 4	1) The test sample shall be stripped to expose the core material and the fire tests shall be carried out on the core material. 2) External wall for mounting of composite panels shall have a fire resistance rating of at least 1 hour.
	BS 476 Part 11; or	Meet the criteria stipulated in BS 476 Part 11	
	BS 476 Part 7 & BS 476 Part 6; or	BS 476 Part 7: Class 1 & BS 476 Part 6: Class 0	
	EN 13501-1; or	Class B or better	



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	NFPA 285	Meet the criteria stipulated in NFPA 285	1) The fire test shall be carried out on the whole panel assembly. 2) External wall for mounting of composite panels shall have fire resistance rating of at least 1 hour.
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3. QPs and RIs are reminded to check the test report and Certificate of Conformity (COC) to ensure that fire tests are carried out on the core material of the composite panel when tested to BS 476 Part 4, BS 476 Part 11, BS 476 Part 7 & BS 476 Part 6 or EN 13501-1. If QPs and RIs are in doubt, notwithstanding the test report and COC, they may wish to consider obtaining cladding samples from the site for fire tests by an accredited testing laboratory.

4. Please convey the contents of this circular to members of your Board/ Institution/ Association. This circular is also available in CORENET-e-Info: <http://www.corenet.gov.sg/einfo>. For any clarification, please contact Mr. Pang Tong Teck at DID: 68481403 or Email: pang_tong_teck@scdf.gov.sg.



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ANNEX B

RECOMMENDATIONS TO STRENGTHEN THE REGULATORY REGIME FOR CLADDING

1. The Singapore Civil Defence Force (SCDF) periodically reviews its regulatory regimes related to fire safety to ensure that they remain robust and relevant.
2. SCDF has reviewed the regulatory regime for cladding, to tighten the policies, regulations and certification processes. The review follows the discovery in Singapore of non-compliant composite panels used as cladding on the external walls of buildings last year. There have also been serious fires overseas due to inappropriate composite panels being used as cladding. Suite to the review, SCDF seeks to introduce enhancements that will:
 - (a) allow earlier detection of composite panels in the supply chain that do not conform to fire safety standards; and
 - (b) strengthen deterrence against breaches of the fire safety regulations.

Key Recommendations

3. SCDF's review has identified four key areas for improvement:
 - (a) Certification requirements for composite panels;
 - (b) Availability of critical product information for ease of differentiation and identification of composite panels;
 - (c) Accountability on the supply and use of composite panels; and
 - (d) Stakeholders' understanding of regulatory requirements.
4. The recommendations mainly concern composite panels. However, some of these recommendations also apply to the regulation of fire safety products in general, such as enhanced powers to allow SCDF to take action against parties that supply or use non-compliant products.

Certification Requirements for Composite Panels to be Tightened

5. Regulated fire safety products must be certified by local Certification Bodies (CBs), which provide third-party assessment of the conformance of these products to the required standards, by using test results from local or overseas testing laboratories accredited by



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the Singapore Accreditation Council (SAC) or recognised under an SAC Mutual Recognition Arrangement. A Certificate of Conformity (CoC) is issued by the CBs if the product meets the certification requirements. Each CoC is valid for five years. SCDF also requires CBs to conduct periodic surveillance of certified products to ensure continued conformity, based on an internationally-recognised framework.

6. Currently, composite panels used as cladding are subjected to Certification Scheme 2 under the ISO 17067 standard. This scheme entails certification of the product based on test reports of its fire safety performance, as well as an annual visual inspection and burn test of sample panels. However, the scheme does not fully address other factors that could result in non-compliant composite panels being supplied to project sites (e.g. due to manufacturing inconsistencies or undeclared modification of the panels which can degrade their fire performance).

7. To ensure greater quality assurance throughout the supply chain, **SCDF will enhance the certification requirements for composite panels to include mandatory annual factory inspections of manufacturing processes, annual quality audits of the CoC holders' factory management systems, as well as testing of samples from every new project site**, in addition to current requirements. Given that project sites are the final points of check before installation, site testing provides a strong deterrence against the use of non-compliant cladding.

8. Currently, information that is reflected on the CoCs for composite panels is not standardised. While some CBs include certain details in the CoCs (such as the panels' fire performance, the CoC holders' particulars, manufacturer and country of origin), others do not. To help SCDF and industry professionals verify such information more easily, **SCDF will require CBs to include a specified set of information on the CoC** (e.g. CoC reference number, issue and dates) and CoC holder (e.g. company name, address, contact number and unique entity number) in every CoC. This applies to CoCs for all fire safety products, and not just composite panels.

9. **SCDF also intends to restrict the issuance of CoCs for all fire safety products to only locally-registered companies.** This will ensure that SCDF is able to take action directly against CoC holders who supply non-compliant fire safety products for use in Singapore. This is not possible if they are based overseas and beyond SCDF's jurisdiction. Companies who wish to supply regulated fire safety products to the Singapore market will henceforth have to do so via a local distributor.



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Stakeholders' Understanding of Regulatory Requirements to be Enhanced

10. To ensure more clarity and transparency of the cladding regulatory regime for stakeholders, **SCDF proposes to require all CBs to publish their certification procedures on their websites, and to make information on CoCs readily available online.** SCDF will also work with professional bodies, such as the Institution of Engineers Singapore and Singapore Institute of Architects, to conduct seminars and dialogue sessions for industry professionals, to improve their understanding of SCDF's requirements for regulated fire safety products.

Critical Product Information to be Permanently Embossed onto Composite Panels

11. There are composite panels which are visually identical, but yet have different fire performance ratings due to their different uses (e.g. as roof covering vis-à-vis as cladding). The risk of such panels being mixed up at project sites and warehouses is high if they are not clearly labelled. This could lead to the use of wrong types of composite panel being installed as cladding on buildings.¹ To address this, **SCDF will require CoC holders to permanently emboss critical information such as product brand and model number, fire performance, name of manufacturer, manufacture date, country of origin and CoC reference number on every composite panel.**

Greater Accountability for the Supply and Use of Composite Panels

12. While the Fire Safety Act (FSA) makes it an offence for a person to install fire safety related products which are non-compliant with the Fire Code without lawful excuse, it is currently not an offence for a person to supply non-compliant products (short of installation). **SCDF proposes to amend the FSA to (a) make it an offence for any person to use, or cause to be used, any fire safety products or materials that are not compliant with Fire Code requirements, and (b) allow SCDF to order errant parties to take remedial actions, including recalling or stopping the sale of such products or materials, and removing them from buildings.**

13. In addition, **SCDF intends to make it mandatory for all Qualified Persons (QPs) to submit the CoCs of composite panels used as cladding, as part of the building plan submission.** QPs are also expected to supervise the testing of composite panels

¹ SCDF's Fire code mandates stringent fire safety standards for composite panels used on buildings. Composite panels have different fire classifications. There are five classes of certification - Class '0' (no flame spread) to Class '4' (rapid flame spread) - to indicate the rate of flame spread. Those used as cladding must be non-combustible or certified as Class '0'.



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taken from project sites and confirm the scale of usage and where exactly these panels are to be installed on-site. Registered Inspectors will be responsible for verifying that these requirements have been satisfactorily fulfilled.

Cladding Regulatory Regime Review Advisory Panel

14. SCDF convened a Cladding Regulatory Regime Advisory Panel on 1 February 2018 to advise it on its recommendations, in particular, their impact on the industry. The Panel, which concluded its work on 13 September 2018, had suggested several changes to SCDF's original recommendations, and agrees with the revised recommendations. It also assesses that the associated costs to the industry are manageable. The list of Panel members is at [Annex](#).

Implementation Timeline

15. MHA and SCDF are currently reviewing the FSA, with the intention of amending the Act next year. The recommendations to strengthen the cladding regulatory regime are slated to be implemented about six months after the amended FSA comes into force. This will give the industry enough time to adjust to the new certification requirements.

16. In the meantime, SCDF will implement the recommendations that can be effected without legislative changes. These include organising dialogues and seminars to enhance the industry's understanding of regulatory requirements, standardising the information fields in CoCs, and introducing the requirement for QPs to submit CoCs as part of the building plan submission.

Issued By:

Public Affairs Department
Singapore Civil Defence Force
Thursday, 8 November 2018, 1130hrs



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Annex

Cladding Regulatory Regime Review Advisory Panel

Name	Designation
COMR Eric Yap (Chairman)	Commissioner Singapore Civil Defence Force
SAC Christopher Tan	Director (Fire Safety and Shelter Department) Singapore Civil Defence Force
AC Lian Wee Teck	Director (Central Enforcement Department) Singapore Civil Defence Force
Mr Chin Chi Leong	Deputy Chief Executive Officer (Building Control)/ Commissioner of Buildings Building and Construction Authority
Ms Choy Sauw Kook	Assistant Chief Executive & Director-General (Quality and Excellence) Enterprise Singapore
Er Dr Lee Bee Wah	Member of Parliament Nee Soon GRC
Prof Tan Kang Hai	Professor (School of Civil and Environmental Engineering) Nanyang Technological University
Mr Augustine Tan	President Real Estate Developers' Association of Singapore
Mr Kenneth Loo	President Singapore Contractors Association Limited
Mr Steve Kettle	ASEAN Technical Manager (Passive Fire Safety) Asia/Asia Pacific Fire Engineering Group of Exova Warringtonfire
Mr Mathieu Meur	Director DP Architects
Mr Tan Beng Leong	Principal TBL Architects
Mr Timmy Mok	Senior Advisor T.Y. Lin International Pte Ltd

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