

July 7, 2017

STATEMENT REGARDING CONTINUED SAFE USE OF NUDURA INSULATED CONCRETE FORMS WITHIN BUILDINGS OF NON-COMBUSTIBLE CONSTRUCTION

First and foremost, NUDURA Inc. extends our sincere condolences to the families and those that have been directly or indirectly affected by the recent Grenfell Tower fire. In light of the concerns that have been raised by this tragic incident, NUDURA has been asked by our valued clients to provide a statement with respect to our Insulated Concrete Form System and the safety of structures employing our technology both now and in the future.

NUDURA's Insulated Form System has been marketed throughout the UK and Europe under European Technical Approval/Assessment (ETA 07/0034) since 2007, which was evaluated and approved under the British Board of Agrément (BBA) and deemed to be in full accordance with European Organisation of Technical Approval (EOTA) European Approval Guideline (ETAG) Document 009 (*"Non-Load Bearing Permanent Kits/Shuttering Systems based on Hollow Blocks or Panels of Insulation Materials and sometimes Concrete"*).

The foam plastic insulation used in our systems has also been assessed to be in full compliance with the Code Standards of Europe and the UK, specifically EN 13501-1 – attaining Classification E. All EPS foam used in our formwork (by this and similar manufacturing Regulations within North America) contains a mandatory polymeric based flame inhibiting agent, which is designed to extinguish flame when the flame source is removed from contact with the foam.

Independent of the EPS foam elements of the wall, – the full wall assembly with concrete core and finishes applied has been tested and determined to have an overall fire resistance rating of 4 hours for a minimum 152mm thickness concrete core when tested to Standard compliances consistent with the EN 1365-2 Standard *"Fire Resistance Tests for Loadbearing Elements"*.

Outside of Europe, it should be noted as well that NUDURA is approved for use on all types of Non-Combustible Construction including multi-storey construction. NUDURA has been approved in both Canada and the USA (with Certifications by Intertek Testing Services Inc.) to the National Manufacturing Standards for ICFs (ASTM E2634 and CAN/ULC S717.1) and within the USA under the International Code Council Evaluation Service via NUDURA's Evaluation Report No. ESR-2092. The System carries formal listing classifications for Fire Resistance Rating by Underwriters Laboratories and UL Canada (4 hours) to the North American Equivalent Standards to EN 1365, namely, ASTM E-119/UL 263 and CAN/ULC S101.

All world Codes including EuroCode II and all Applicable UK Building Codes additionally assure that our EPS foam products are protected from direct exposure to all building interior spaces via an approved thermal barrier (i.e. typically a minimum 12.7 mm gypsum board) that is installed in full contact with the EPS foam surface via mechanical attachment to NUDURA web materials. On the building exterior, all applicable prevailing Building Codes also require that within buildings designated to be of non-combustible construction, the EPS foam plastic must be covered with approved non-combustible finishes such as minimum 25mm thick concrete or masonry with a maximum ventilated cavity of no more than 50 mm or non-combustible acrylic based architectural rendering systems (compliant with EOTA-ETAG 004) that have been certified in compliance to the NF EN 13501-1+A1:2013 Standard.

Additionally, each architectural coating to be used in conjunction with our EPS foam must also be Certified to be in compliance with BS 476 Part 6 (Fire Propagation) and BS 476 Part 7 (Surface Spread of Flame Class 1 and 2) and the coating must attain a UK fire Classification of "0" under this test for any direct applied mineral/acrylic render that is used with NUDURA's Insulated Concrete Form System .

In all applications of these non-combustible finishes, detailing at all window, door and mechanical penetrations or openings requires that the jamb and head interfaces to the exterior must be completed to ensure that the outer EPS NUDURA foam panel is fully protected with the same level of non-combustible finishes as specified above and, where applicable, in accordance with the certified finish manufacturers specifications.

Finally, one of the key concerns at Grenfell was revealed to be the dangers posed by the toxicity of gases emitted during combustion of the Polyisocyanurate (PIR) Insulation, a by-product of which was revealed to be hydrogen cyanide. Contrary to this finding, many available scientific studies on the by-products of combustion of EPS reveal that the primary gases produced are no different than for burning wood. (i.e. carbon dioxide and carbon monoxide) and therefore, does not pose any risk of exposure to hydrogen cyanide. It should be noted however that the risk of human exposure to such toxins is significantly mitigated by the robust Code requirements that are already built into BOTH the product evaluation Standards for ICFs and the requirements mandated by the applicable Building Codes throughout the UK and Europe for ICF Systems.

Should any of our clients desire copies of our testing data and System approvals, please contact us directly at:

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Or by email at info@nudura.com