

FIRE & FAÇADE

JULY 2026

FIRE RETARDANCY

PRODUCT REFERENCE

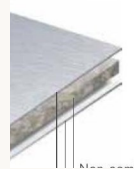
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RATING VERSUS RETARDANCY

Every panel has a fire rating. Very few are actually fire retardant. The distinction is a specification choice.

PAGE 03 →



ALUCOBOND®PLUS VS ALUCOBOND®A2

Two mineral-core panels. Two fire classifications. Where each one belongs on the drawing.

PAGE 05 →



LEAD EDITORIAL / FIRE RETARDANCY

Fire retardancy starts at the planning stage.

Not at the point of delivery. Not at the fire marshal's inspection. Where the specification is written is where the fire performance of the envelope is decided.

LEAD EDITORIAL

Fire rating and fire retardancy are not the same thing.

Every material sold for the exterior of a building carries a fire rating. It is a laboratory number, describing how the material behaves in a specified test. Fire retardancy is a different question — it is what the material actually contributes to the survival of the building when a fire begins. This issue is a working guide to the distinction.

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A fire rating is a description. It classifies a material — as tested — against a written standard. ASTM E-84. BS 476 Part 6&7. EN 13501-1. Class A, Class B, Class 0, Class A2 s1 d0. The rating is real, but it is descriptive. It tells the specifier how a laboratory sample of the product behaved in a laboratory apparatus, under laboratory conditions.

Fire retardancy is a performance. It is the material actively refusing to propagate combustion. It is the panel that does not release flaming droplets that fall two floors and ignite the cladding below. It is the mineral-core panel that self-extinguishes when the ignition source is re-

moved, rather than continuing to feed the flame front.

Four criteria decide whether a material is fire retardant in the working sense of the term. The spread of the flame across the surface. The density of smoke released while burning. The presence of flaming droplets. And the material's ability to self-extinguish when the ignition source is withdrawn.

All four are testable. All four are specifiable. But the panel that arrives on site meets the four criteria only if the specification demanded it — and only if the production batch matches the tested sample.

Everything in this issue follows from that observation.



FIG. 01 • A MINERAL-CORE ALUMINIUM COMPOSITE PANEL INSTALLED AS TOWER CLADDING. THE PANEL THAT BEHAVES AS FIRE-RETARDANT IN REAL CONDITIONS IS THE PANEL THAT WAS SPECIFIED TO.

THE DISTINCTION

Every panel has a fire rating. Very few are fire retardant.

A rating is a description. Retardancy is a behaviour. The specifier decides which the building will get.

LEAD EDITORIAL / CONTINUED

Three markers of a genuinely fire-retardant façade panel.

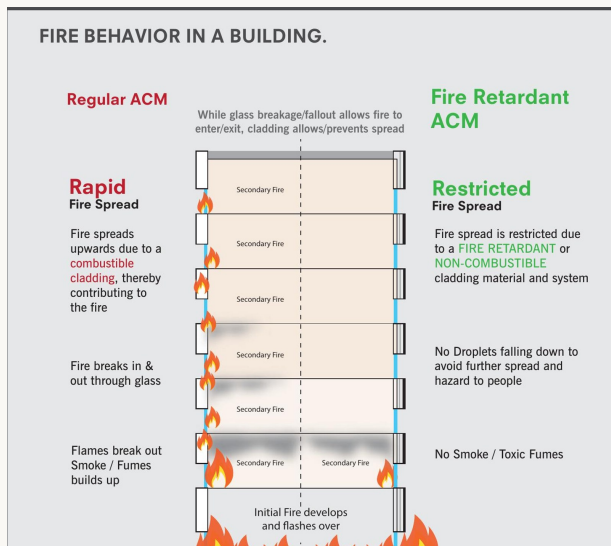


FIG. 02 · FIRE BEHAVIOUR OF MINERAL-CORE ALUMINIUM COMPOSITE PANELS UNDER LABORATORY TEST CONDITIONS. SOURCE: 3A COMPOSITES TECHNICAL DATA.

II

A production batch that does not match the tested sample is not the panel the specifier signed off on. It is a different product with the same label.

A WORKING RULE FOR FAÇADE PROCUREMENT

01. Mineral core, at a disclosed percentage. A fire-retardant aluminium composite panel derives its behaviour from the mineral content of the core. High-mineral cores (≥ 70 percent) resist ignition and self-extinguish. Non-combustible cores (typically >90 percent mineral) do not sustain combustion at all. The specification should name the percentage — not the marketing label — and require batch-level confirmation.

02. Third-party classification against a named standard. A single certificate from an accredited testing body against a named code — EN 13501-1, ASTM E-84, BS 476, NFPA 285 — is worth more than a manufacturer's claim. The certificate should name the tested product, the tested build-up, and the classification achieved. If any of the three is missing from the certificate, the certificate does not describe the panel arriving on site.

03. Tested as an assembly, not only as a product. A panel tests one way in a small laboratory apparatus. The same panel behaves differently on a real façade — with joints, cavities, brackets, insulation, and openings behind. NFPA 285 and BS 8414 are assembly tests: they burn a full mock-up of the wall. A specification for any tall building should combine a product-level classification with a system-level assembly test.

Where any one of the three is absent, the panel is being sold on a description of fire performance — not on evidence of it.

REFERENCE / THE WORKING STANDARDS

The five standards a Philippine specification should name explicitly.

A specification that names a code binds the supplier to a test. A specification that says only "fire-rated" or "FR" binds the supplier to a brochure. These five are the standards that carry weight in the regional market – and what each one is actually measuring.

STANDARD	WHAT IT MEASURES	SCOPE
ASTM E-84	Flame spread and smoke developed on interior finish materials, tested in a Steiner tunnel. Result reported as Class A / B / C.	PRODUCT
BS 476 PART 6 & 7	Fire propagation (Part 6) and surface spread of flame (Part 7) on building materials. Result reported as Class 0 / 1 / 2 / 3.	PRODUCT
EN 13501-1	Reaction-to-fire classification for construction products. Multi-part rating: A1 / A2 / B / C / D / E / F, with smoke (s) and flaming-droplet (d) sub-classes.	PRODUCT
NFPA 285	Full-scale assembly test of an exterior wall build-up. Ignites a burner on the ground floor; measures flame spread up the façade and into the cavity behind.	ASSEMBLY
BS 8414	British full-scale assembly test of an external cladding system. Equivalent purpose to NFPA 285; different apparatus.	ASSEMBLY

THE SPECIFICATION RULE

Combine one product test with one assembly test.

A product-level rating (EN 13501-1 or ASTM E-84) tells the specifier how the panel behaves as a material. An assembly-level test (NFPA 285 or BS 8414) tells the specifier how the panel behaves as a wall. Any building over 15 metres should carry both.

Note. The Philippine National Building Code and Fire Code of the Philippines accept a combination of the standards above as basis for compliance for external cladding on buildings of significant height and occupancy. The specification document should name the applicable code path – and the supporting test standard – explicitly.

PRODUCT REFERENCE / FIRE RETARDANCY

Two mineral cores. Two fire classifications.

The clearest working example of the rating-versus-retardancy question is the two mineral-core panels in the ALUCOBOND® line. Same manufacturer. Same aluminium skin. Two distinct cores – and two distinct places on the specification document.



FIRE-RETARDANT CORE

ALUCOBOND® plus

Aluminium composite panel with a mineral-filled polymer core. Fire retardant, tested as product and as assembly.

CORE	Mineral-filled polymer; high mineral content.
EN 13501-1	Class B s1 d0 — limited combustibility, low smoke, no flaming droplets.
ASTM E-84	Class A — flame spread < 25, smoke developed < 450.
NFPA 285	Pass — full-assembly exterior wall fire test.
BS 8414	Pass — full-scale British external cladding test.
WHERE IT FITS	Tall buildings requiring fire-retardant cladding; hotels, offices, mixed-use where an assembly test is called for.



NON-COMBUSTIBLE CORE

ALUCOBOND® A2

Aluminium composite panel with a non-combustible mineral core. The highest ACP fire classification available.

CORE	Mineral core > 90 percent; non-combustible.
EN 13501-1	Class A2 s1 d0 — non-combustible, low smoke, no flaming droplets.
ASTM E-84	Class A — flame spread < 25, smoke developed < 450.
NFPA 285	Pass — full-assembly exterior wall fire test.
BS 476 6 & 7	Class 0 — the British-standard non-combustible tier.
WHERE IT FITS	Hospitals, schools, evacuation-limited occupancies, high-rises where owner's brief or code requires non-combustible cladding.

Product data as published by 3A Composites GmbH (ALUCOBOND® manufacturer). Both products are supplied in the Philippines through **Fasclad Inc.** — the exclusive Philippine distributor of ALUCOBOND®. Product-level and assembly-level test reports are available on request against the code path applicable to the project.

PROJECT SPOTLIGHT / FIRE RETARDANCY IN THE FIELD

Two Fasclad projects. Two fire-performance briefs.

The specification argument in this issue is not theoretical. Below are two projects where Fasclad executed the fire-performance requirement at scale — an integrated resort in Central Luzon and a performing-arts and mall expansion in Cebu.

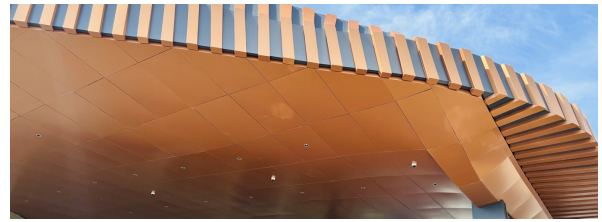


INTEGRATED RESORT & CASINO

Royce Hotel & Casino

Faceted gold-tone aluminium composite cladding on the porte-cochère and entry volume — a high-visibility public-occupancy project on the Clark Freeport zone.

LOCATION	Clark Freeport, Pampanga
PANEL SPEC	Fire-retardant ACP, mineral-filled core, faceted diamond geometry with concealed-fix routing.
FIRE PATH	EN 13501-1 B s1 d0 product classification; assembly-level test report on file for wall build-up.
FASCLAD SCOPE	Design assist, fabrication, and installation of the faceted ACP envelope on the entry volume and the ancillary retail podium.
WHY IT MATTERS	Assembly-occupancy building, high public footfall — the code path calls for a product test plus an assembly test. Both are documented.



PERFORMING ARTS & MALL EXPANSION

NuStar Performing Arts Theater

Copper-tone parametric canopy — deep-fin ACP soffit and fascia sweeping across the mall expansion entry at NuSTAR Cebu.

LOCATION	South Road Properties, Cebu City
PANEL SPEC	Fire-retardant ACP, mineral-filled core; parametric fin geometry with concealed-fix substructure.
FIRE PATH	EN 13501-1 B s1 d0 product classification; assembly-level test report on file for the canopy build-up.
FASCLAD SCOPE	Engineered fabrication of the sculpted fin canopy and soffit, coordinated with the theater expansion and mall entry structural frame.
WHY IT MATTERS	Entertainment-and-assembly occupancy at scale — the fire-performance brief is written into the specification, not the marketing description.

FASCLAD WORKING PRACTICE

The fire-performance specification travels with the drawing set.

On both projects the specification named a product-level classification (EN 13501-1) and an assembly-level test path. The panel selection, the substructure detail, and the batch documentation were coordinated to match — before fabrication began.

REGIONAL BRIEF / CODE & OCCUPANCY

What the Philippine code path expects.

Where the fire performance of a cladding system is prescribed by law — as it is in the Philippines for buildings above a threshold height and for occupancies with elevated life-safety risk — the specification should be written to the code, not to the marketing description of any product.

HEIGHT & DENSITY

The National Building Code of the Philippines and the Fire Code (RA 9514) prescribe fire-resistance and non-combustibility requirements that escalate with building height, occupancy, and floor area. Above 15 metres, the specification burden rises sharply.

OCCUPANCY SENSITIVITY

Occupancies with limited self-evacuation capacity — hospitals, schools, senior-living, hotels — carry stricter cladding requirements than commercial or residential towers of the same height.

CODE PATH — PHILIPPINES

Compliance is typically demonstrated through third-party test reports against EN 13501-1 or ASTM E-84 for the product, combined with an NFPA 285 or BS 8414 assembly-level report for the wall build-up.

CODE PATH — REGIONAL

Singapore SCDF, Malaysian JBPM, Indonesia SNI, Thailand DPT, and Vietnam MOC all now converge on similar combinations: an EN 13501-1 or ASTM E-84 product classification with an assembly-scale wall test. A specification portable across ASEAN should carry both.

COASTAL & TROPICAL ADDERS

The regional operating environment adds separate concerns — corrosion of alloys, UV degradation of paint, adhesive performance under humidity — that are the topic of Edition 02 of this brief. Fire performance is a distinct, but related, specification axis.

THIRD-PARTY VERIFICATION

Manufacturer's in-house test data is a starting point. Third-party reports from Warrington, Exova, Efectis, Underwriters Laboratories, or an equivalently accredited body are what carry weight with authorities having jurisdiction.

SPECIFICATION CONCLUSION

The safest working practice for any building over 15 metres in the Philippine market is to name the required EN 13501-1 or ASTM E-84 classification, require an NFPA 285 or BS 8414 assembly report, and require batch-level documentation of the mineral content of the core.

“
*Fire protection for
your building begins
at the planning stage
— not at the fire
marshal's inspection.*”

THE WORKING RULE FOR
EDITION 03

PRACTICAL / SPECIFICATION WORKSHOP

Six questions before you specify a fire-rated panel.

A working checklist for design managers, façade consultants, and procurement teams writing the fire-performance section of a cladding specification. Written to force the conversation onto evidence, not brochure claims.

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|---|---|
| <p>01 What is the code path? Name the Philippine code section, or the international standard the project is being certified against, before choosing a panel. The specification serves the code, not the other way around.</p> <hr/> <p>02 Product classification? Require EN 13501-1 or ASTM E-84 at minimum. Name the required class (A2 s1 d0, or Class A, or Class 0 to BS 476) explicitly.</p> <hr/> <p>03 Assembly test? For any building above 15 metres, require an NFPA 285 or BS 8414 assembly report matching the specified wall build-up.</p> <hr/> <p>ACP / ACM Aluminium Composite Panel (or Aluminium Composite Material). Two aluminium skins bonded to a core. The core material decides the fire performance.</p> <hr/> <p>FR CORE Fire-Retardant core. Mineral-filled polymer. Performance is a function of mineral percentage, not of the label.</p> <hr/> <p>A2 Non-combustible classification under EN 13501-1. Achieved with mineral content typically >90 percent.</p> | <p>04 Mineral content of the core? Specify the percentage — not the label. ≥70 percent for fire-retardant applications; >90 percent for non-combustible.</p> <hr/> <p>05 Batch documentation? Require the supplier to produce batch-level test certificates confirming the production panel matches the tested sample. Retain in the O&M pack.</p> <hr/> <p>06 Assembly match? Confirm the wall build-up as constructed — panel, cavity, insulation, brackets, joints — matches the assembly used in the NFPA 285 or BS 8414 test. Substitutions void the certificate.</p> <hr/> <p>S1 D0 Sub-classes under EN 13501-1. s1 is the lowest smoke emission tier; d0 means no flaming droplets. A2 s1 d0 is the highest working retardancy result for cladding.</p> <hr/> <p>NFPA 285 / BS 8414 Full-scale assembly-level exterior wall fire tests. NFPA is American; BS 8414 is British. Both burn a full mock-up of the wall.</p> <hr/> <p>ASSEMBLY TEST A fire test of the wall build-up as constructed — panel, brackets, insulation, cavity — rather than of the panel alone.</p> |
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IN SUMMARY • THE ARGUMENT OF THIS ISSUE

Specify the mineral content. Verify the certificate. Test the assembly.

A fire rating is a starting point. Fire retardancy is what the building actually gets — and it is decided by the specification document, the mineral content of the core, and the assembly report of the wall.

FOR THE DESIGN & DEVELOPMENT COMMUNITY

Thank you.

For reading. For sharing. And for the fire-performance specifications you are writing today that will make the difference on the day a building actually needs them.



Published by **Fasclad Inc.** — a Philippine specialist façade engineering and contracting company, A-Level PCAB licensed, and the **exclusive Philippine distributor of ALUCOBOND®** aluminium composite panels manufactured by 3A Composites GmbH. Nationwide footprint across Luzon, Visayas, and Mindanao. *The Façade Brief* is a non-commercial editorial published occasionally for the design and development community. Reproduce or share freely with attribution.

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