

KEY ACTIVITIES

- Prevent fire and arson
- Minimise core involvement
- Maintain panel integrity
- Prevent premature panel failure

Through proper management and housekeeping the risk of fire can be significantly reduced. Many easy and cost effective approaches can be implemented.

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| o Have adequate fire extinguishers and hose reels – with staff trained in the correct procedures. | o Repair any damaged panel immediately. Where penetration is unavoidable always use fire rated collars or approved conduits, and flashings to protect exposed core materials in the panel. |
| o Have approved hot work and cold work systems. | o Take care with heated flues or piping that penetrate any panel. Best practice is to use a non-combustible material in the area of penetration. Alternatively remove the core material around the flue or pipe leaving an air gap, and flash off any exposed core. This activity should be supported by a suitable fire report. |
| o Ensure that all goods stored internally are at least 1.0m clear of all panel walls and fire exits. | o Do not use nylon bolts. |
| o Ensure that all electrical equipment is in good working order, and include an annual and documented inspection regime. | o Support panels off main structures, not off other panels. |
| o Keep heating equipment clear of any panel. Switchboards should not be mounted to insulated panel. Relocate or isolate. These are hot spots and potential sources of combustion. | o Do not use panels as a support for pipe works, sprinkler, air-conditioning, refrigeration or other loads. |
| o Remove all waste and combustible materials immediately from site. | o For new construction use XFLAM panel core. |
| o Store hazardous liquids and chemicals in approved containers and cupboards. | o Provide fire breaks by replacing sections of combustible panel with XFLAM panel. |
| o Prohibit smoking near insulated panel. | o Create fire cells using XFLAM panel. |
| o Don't refuel any vehicle with liquid fuels or gases against any panel structure. Forklift recharging should have a minimum 3.0m clear fire break in all directions. | o Ensure that panel is installed as per the design drawings and relevant producer statements. |
| o Do not store any items in the roof or ceiling space. | o All materials stored externally must be located more than 10.0m from the building unless sprinklers are present. |
| o Avoid penetration of the panel. | o Record, document and review all housekeeping and risk management procedures regularly. |
| o Use independently supported surface mounted fixings or conduits. | |
| o Route any cabling on the surface of the panel in metal conduit. | |

Sources: IPENZ, Plastics NZ, Willis, IAG, Marsh, XFLAM Global, FM Global.

Details and specification in this brochure are subject to change without notice. While every care has been taken to ensure the accuracy of all detail, no responsibility will be accepted for any errors or omissions.



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INSURER APPROVED PANEL SYSTEMS
FIRE ENGINEERING COMPLIANCE SOLUTIONS



FIRE RESISTANT INSULATION



FOR SUPERIOR PERFORMANCE SOLUTIONS INSIST ON...

BondorNZ™

XFLAM is a new generation of fire resistant insulation material that is highly suitable as a core in insulated panel systems. Manufactured in a proven lamination process XFLAM insulated panel provides outstanding fire performance, excellent structural strength, and advanced thermal performance. As a syntactic foam, XFLAM is safe to work with, has low toxicity and is completely recyclable.



INSURANCE AND PEACE OF MIND

XFLAM insulated panels are the first panels in Australia and NZ to achieve FM accreditation for the following standards.

- o FM 4880 – Internal Wall and Ceilings (Class 1) Unlimited Height
- o FM 4881 – Exterior Walls
- o FM 4471 – Roof Systems

These tests for accreditation were undertaken at FM Global's testing facility in Rhode Island, New York, and determine a products performance under various fire and environmental conditions.



NZBC COMPLIANCE

Tested and rated under AS1530.4 and ISO 9705 for fire resistance and flashover. XFLAM panels are easily incorporated into the designs of fire cells and internal and external walls requiring a FRR.



FIRE SAFE

In the event of a fire incident fire does not spread in the core and the behaviour if the core is limited to charring. The low generation of smoke and fire spread characteristics contribute to the added safety for the building occupants and property.



THERMAL

XFLAM has advanced thermal ratings that do not diminish, high values are achieved using standard insulated panel thickness easily surpassing the minimum requirements of the NZBC.



STRENGTH

XFLAM panel has superior spanning capabilities in comparison to other products in the market, resulting in reduced structural requirements, faster build times, and a greater useable space.



SUSTAINABLE

As the lowest density fire rated insulation core on the market, less XFLAM material is required in the panels which reduces the building mass and embodied energy. Recyclability of the panel core and steel faces ensures minimal waste product is sent to landfill.



VALUE FOR MONEY

XFLAM is a competitive price solution for fire resistant installations, the speed of build and the benefit of NZ manufacturing ensures BondorNZ systems are installed without delay.



SEISMIC RESILIENCE

The lightweight nature of XFLAM panel ensures that in the event of an earthquake the lateral loadings are minimal. Occupant safety is high and property damage is negligible due to the high bracing capacity and the inherent strength of the steel skins.

BondorNZ can provide you with the right information around insulated panel construction and systems. We can advise on correct installation methods and product detailing to meet FM accreditation and compliance to the requirement of the NZ Building Code. We can also assist in identifying panel systems used in buildings and consult on industry best practice. Our core values are that all our staff are reliable, accessible, knowledgeable and personally dedicated. Please contact our staff at any time.

SPRINKLERS AND FIRE DESIGN

While sprinklers and wall drenching systems offer considerable fire protection and comfort, in some instances they are not practicable or feasible to install. In sprinklered or unsprinklered situations BondorNZ has a number of systems that will comply with the Acceptable Solutions C/AS1 to C/AS7 for the NZBC Clauses C1 to C6: Protection from Fire. When building with features or systems outside the scope of the Acceptable Solutions then further design should be undertaken under C/VM2 by a qualified fire engineer.



FIRE SPREAD AND FIRE RESISTANCE RATINGS (FRR)

Prudent fire design recognises the provisioning for fire cells, the control of smoke and the control of internal and external fire spread. To prevent fire spread, building elements are required to have fire resistance ratings (FRR), the level of FFR depends on the risk group of the building defined in C/AS1 to C/AS7. XFLAM panel has been tested under AS1530.4 to achieve the following FFRs (Table 1). Where the first indices is a structural element independently rated by others. XFLAM panel is ideal for creating fire cells, fire compartments and fire walls.

TABLE 1	STRUCTURAL	INTEGRITY MINUTES	INSULATION MINUTES
50mm	INDEPENDANT RATING BY OTHERS	120	15
100mm		120	30
175mm		120	60
250mm		120	115
300mm		120	120

SURFACE LININGS AND FLASHOVER

When foamed plastic insulated panels (including PIR, PUR and EPS) are used to form a wall, ceiling or roof system then the panel system is required to meet a surface finish Group Number under ISO9705. This is required regardless of whether the building is sprinklered or unsprinklered, but is typically lower in non-sprinklered buildings. XFLAM has been tested under ISO9705 and achieves the highest possible classification of Group 1-S. BondorNZ can also provide construction detailing and supporting documentation to achieve Group 1-S using BondorNZ's EPS panel systems.

