



**HEALTH &
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Management and Control of Composite Insulated Panels

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- What are CIPS (Composite Insulated Panels):

CIPS are a pre-fabricated building product that consists of two usually metal faces that are bonded either side of a thermally insulated core material



- CIPS use:

CIPS are commonly used for walls and ceilings in various internal building applications such as cold storage, clean rooms, warehousing, food factories and creating internal rooms as well as for external cladding

- CIPS benefits:
 - Excellent thermal insulating properties reducing cold and heat loss
 - Provide a hygienic and durable surface that's easy to clean
 - Lightweight and easy to construct
 - Have good acoustic properties reducing the transmission of sound
 - Cost effective against other forms of construction materials and processes
 - Aesthetically pleasing

- Key CIPS risks and hazards. The seven deadly sins:
 1. Failure to adequately inspect for damage
 2. Failure to rectify damage identified
 3. Lack of knowledge of insurers requirements
 4. No permit system to manage contractor works on or near panels
 5. Lack of fire protection of live services in or around panels
 6. No site plan identifying the type of panels and location for fire and rescue services
 7. Overloading of ceiling panels

1. Inspections

- From a recent survey of BFFF members many do not have an adequate regime of inspection in place nor a Risk Assessment outlining the risks of CIPS and their controls
- Many insurers require *weekly* formal inspections of *all* panels including walls, ceilings, compartments and external
- Inspections must be formalised and adequate to ensure issues have been identified and can demonstrate inspections of *all* panels
- The inspection of CIPS must be carried out by a 'responsible person' trained or having the knowledge and understanding of what constitutes an issue and the required actions to rectify

2. Rectifying issues

- There must be a process for rectifying issues identified through inspections and reporting of incidents

This includes the appointment of contractors, isolating areas or the removal of plant, stock or equipment. Considering your site or sites the implications of this can be costly and time consuming

- There should be someone responsible for ensuring issues are rectified on your site and have the authority to do so

Repairs or improvements can be costly including putting in preventative measures to mitigate against further issues ie relocation of battery charging stations, installation of barriers, bollards or guards, replacing panels, fire stopping, relocating services

3. Insurers requirements

- Consider what do *your* insurers require regarding the safe management and control of CIPS on your premises?
- Many insurance policies state:
 - weekly formal inspections of *all* panels
 - labelling of *all* panels
 - a risk assessment on their safe management and control
 - appointment of a 'responsible person'
 - process for managing contractors works
 - process for managing hot works on or near panels
 - live services protection regarding fire
 - site plans identifying all panel types and locations
 - annual thermographic surveys
 - a plan (being enacted) for the removal/replacement of combustible panels

4. Permits to Work

- Consider...do you have a permit system allowing contractors to work on or *near* panels?
- Many sites have Hot Works Permits but these generally only look at the controls to prevent a fire or in the event of a fire during the works
- Does the PTW require the inspection of the area pre-works *before* the permit is issued *and* post-works before it is signed off?
- Does it require issuing and signing off by a responsible person checking on damage or fire stopping *before* the permit is closed?

5. Fire protection

The biggest cause of loss of life and asset from combustible composite insulated panels is fire, often due to the failure to ensure live services, combustible materials and hot works processes are adequately managed and controlled.

- Electrical systems should not be directly installed onto combustible panels
- Electrical conduits that pass through panels must be protected by non-combustible materials and voids fire stopped
- Flues or heat generating equipment should not be directly installed or located on or within combustible panels and suitable clearance or thermal barriers must in place
- Workshops or activities with fire related activities within combustible panel rooms should be segregated with fire rated enclosures
- Damaged composite panels with their core exposed must be sealed and protected from the risk of fire and to reduce fire spread with non-combustible or fire stopping materials

6. Site Plan

- All sites with composite panels (with combustible component materials or not) require a plan easily available for fire and rescue services indicating the location of *all* composite panels and their type
- All panels (with combustible materials or not) should be labelled to indicate to emergency services and contractors what type they are
- Addressing these two points will assist fire and rescue in how and where a fire is approached and allows them to assess the risk to firefighters lives as well as any other persons
- Many insurers state panel labelling and site plans as a standard requirement and failing to do so could jeopardise a claim in the event of an incident

7. Overloading ceiling panels

- The standard requirement of the allowed weight on internal composite ceiling panels, per panel, is the full weight of a person plus any carried items circa 0.9kN or 91kg.
- Unless specifically designed otherwise ceiling panels are generally classified as 'accessible for installation, occasional inspection and maintenance, minor repairs and cleaning only'.
- Loads imposed on insitu ceiling panels can only be determined by the product data sheet and construction as-built drawings (within the Health and Safety Files) or; a structural engineer assessment taking into account; the type of panel, the load requirements, length of panel, thickness of panel, number of fasteners, type of fasteners and environment

Industry Guidance Document

It has been widely recognised that there is a lack of understanding or clarity on the requirements to safely manage and control insitu composite panels. A recent survey of BFFF members found that nearly 50% of respondents did not have a site plan in place for fire and rescue services and nearly 90% did not label their panels.

The BFFF, Chalcroft and Lincolnshire Fire and Rescue are collaboratively working to provide an industry guidance document to assist building owners and occupiers. The document will provide advice and solutions to specifically addressing 'the seven deadly sins' and many more aspects to managing CIPS including:

- Examples of combustible panel types
- Fire risk and controls
- Legislative requirements
- Online training
- Permit and label templates
- Emergency plan examples
- Risk Registers



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