Property Insurance Statements of Fact

The Jargon Explained

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1

Aims

To give attendees a good understanding of the key terminology used by property insurers in their statements of fact and to look at insurers concerns regarding these issues.

Whilst the session is intended for those who are relatively inexperienced in property insurance, it will also provide a good refresher for the more experienced.

2

2

Objectives

By the end of this session, attendees will be able to:

- Demonstrate an understanding of common construction terminology including "standard construction", "non- combustible", "timber framed" and "Composite Panels".
- Identify some common building materials and state whether they are combustible or non-combustible.
- Explain what the IEE/IET Regulations are and show a basic understanding of electrical inspection requirements.
- Describe the property insurance issues associated with portable heaters, recharging of forklift truck batteries, listed buildings, flat roofs and flammable substances
- Explain what insurers' normal expectations would be regarding basic fire protection measures including fire extinguishers.

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3

Question:01

When insurers talk about "standard construction"
….what do they mean?

a) Are they referring to a recognised industry standard such as the "Categories of Construction" published in 2006?

b) Do they mean traditional construction - buildings with brick or stone walls and a roof made of slate or tile?

c) Or do they mean something else?

4

4

Standard Construction

- There is no industry wide definition of 'standard construction'.
- Insurers will provide a definition in policy documents etc. – e.g.
  Built of brick, stone or concrete and roofed with slates, tiles, metal, concrete, asphalt or sheets or slabs composed entirely of non-combustible mineral ingredients.
- The definition will vary from insurer to insurer and even from policy to policy.
- It is recommended that the term 'standard construction' is avoided or is used very carefully.

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What does non-combustible mean?

- A material is *combustible* if it will be *consumed by fire in normal fire conditions.*
- The opposite of combustible is *non-combustible*.
- Sometimes *incombustible* is used in place of non-combustible. They mean the same, but incombustible is best avoided as it can confuse people.

Inflammable means the same as flammable
but incombustible is the ***opposite*** *of combustible*

6

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How do I determine if a material is combustible or non-combustible?

- Certain materials such as concrete, fired clay, ceramics, metals, plaster, glass, slate and masonry are inherently non-combustible.
- Manufacturers of processed products may need to demonstrate that their products are non-combustible by testing, for example, under BS 476 or BS EN 13501.

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Question:02

Which of these materials would you expect to be treated as combustible by insurers?

a) Plasterboard

b) Profile metal sheeting

c) Corrugated asbestos

d) None of the above

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What is the construction of this building?
…and…What is likely to happen to it in a fire?
Roof:
Walls:
Floors:

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Roof: slates on a timber frame.
Walls: Brickwork
Floors: wood
…and…What is likely to happen to it in a fire?

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What is the construction of this building?
…and…What will happen to it in a fire?
Roof:
Building frame:
Walls:
Skylights and Windows:
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Roof: Corrugated cement sheet likely to contain asbestos fibres.
Building frame: Steelwork
Walls: Originally brick now part over-clad with profile steel sheeting
Skylights and Windows: Wired glass
…and…What will happen to it in a fire?

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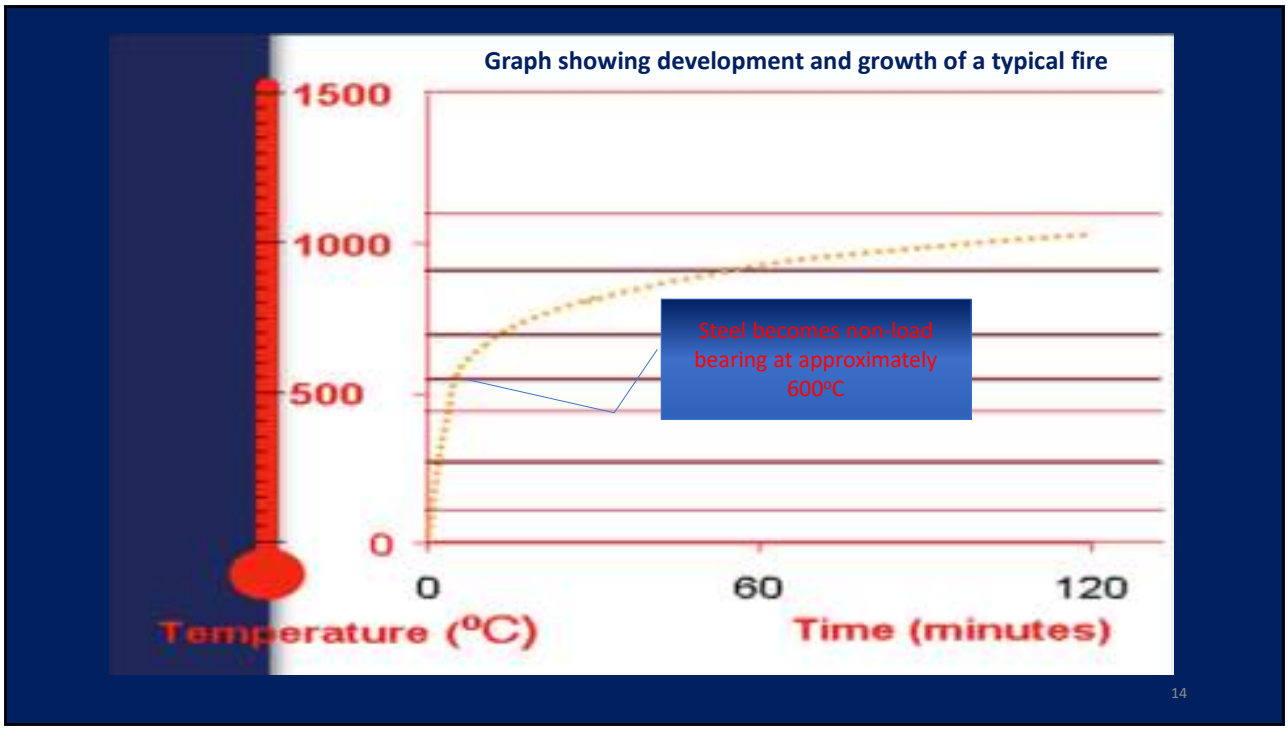
Graph showing development and growth of a typical fire
1500
1000
500
0
0
60
120
Temperature (°C)
Time (minutes)
Steel becomes non-load bearing at approximately 600°C

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15

Fire Resistance

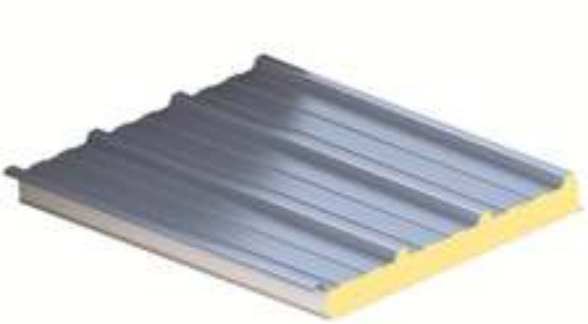
- Although a non-combustible building will not assist fire development and spread, it may still be destroyed by the effects of a fire.
- Buildings that are able to withstand the effects of a fire are called "fire resisting buildings".

16

16

Composite Panels…what are they?

- Composite panels have been around for more than 40 years.
- They are popular construction panels made in factories with an insulation core sandwiched between two metal skins.
- They are widely used externally in the walls and roofs of retail park buildings, warehouses, leisure buildings etc.
- They are also used internally to create internal compartments in, for example, food factories.



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What are insurers' concerns about "composite panels"?

- The insulation core may be combustible.
- A fire within a combustible composite panel core is difficult to fight and extinguish.
- There have been significant fire losses involving composite panels.
- Most serious fires have occurred where panels have been used internally (e.g. in food factories) but there have also been some external fires.

18

18

Composite Panels with a non-Combustible core

- Insurers prefer panels with a mineral wool core because mineral wool is non-combustible.

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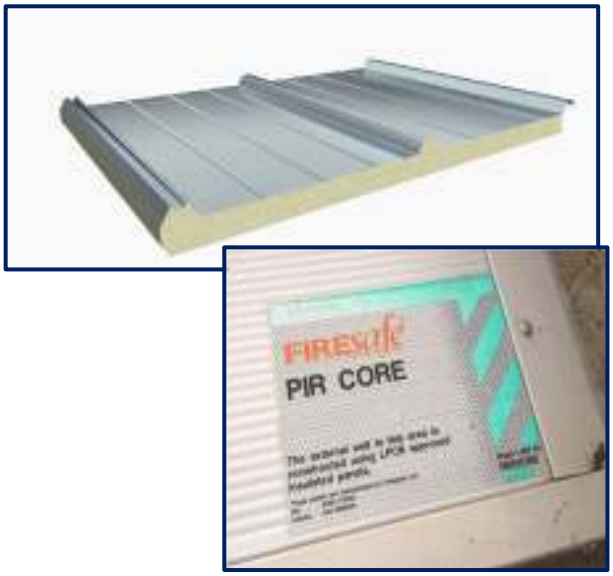
19

Approved & Non-Approved Composite Panels

- Other composite panel cores include:
  - Phenolic Foam
  - Polyisocyanurate [PIR]
  - Polyurethane [PUR].
- These materials are all combustible.
- However, some of the above may be acceptable to insurers if they have been modified, tested and approved under LPC standards (LPS 1181 or LPS 1208).



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Expanded/extruded polystyrene Composite Panels

- Expanded/extruded polystyrene [XPS & EPS] are highly combustible and will be unacceptable to many insurers.

21

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Are all metal clad buildings built using composite panels?

- No, many actually have what are called "built-up" walls and / or roofs that comprise:
  - An external skin of profile metal sheet
  - An insulation material
  - An inner skin (which may be plasterboard, metal, concrete block etc.).
- Built-up walls are put together on site, whereas composite panels are factory made.

22

22

Why do most insurers ask about composite panels but not *built-up* walls?

- With *built-up* systems – the core is *usually* non-combustible (normally glass fibre wool).
- Composite panels – the core is *usually* combustible (e.g. expanded polystyrene, polyurethane etc.).

23

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Question:03

Which of these composite panel cores would insurers prefer?

a) Mineral wool

b) Polyisocyanurate tested and approved to LPS 1181.

c) Polyurethane

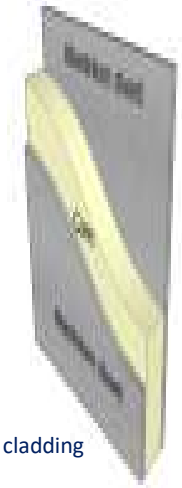
d) Expanded Polystyrene

24

24

Were there composite panels at Grenfell Tower?

- The cladding used at Grenfell Tower has been called "composite panels" in the media but the cladding was actually Aluminium Composite Material (ACM).
- ACM cladding is typically only ~ 5mm thick and made up of two very thin sheets of aluminium with a polyethylene core.
- ACM cladding usually has a separate insulation material installed behind it.



ACM cladding

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What do insurers think about ACM?

- Polyethylene is *highly combustible.*
- The separate insulation material may also be combustible.
- Following the Grenfell Tower fire, insurers are likely to be particularly concerned about ACM and indeed any combustible claddings and / or insulation, especially if the property is high rise (say, over 6 storeys).

NB In a small proportion of cases, high mineral content ACM cores may be used. These perform better in a fire and may be treated as "of limited combustibility" or even "non-combustible" by insurers.

26

26

What is meant by a "timber framed building"?

- Buildings where the structural support comes from a timber frame.
- Brick walls, claddings, tiles etc. which cover the framework are essentially decorative and provide weather protection.
- Timber frame techniques are not new but in recent years have been used for larger and larger buildings including high rise.
- New buildings often have lightweight timber frames, so need board materials to give them the required strength (increasing the overall combustible material content).

27

27

Why do insurers ask if a building is "timber framed"?

- In the event of a fire, the fire may track through wall cavities and voids
- Identifying the location of the fire and then fighting the fire can be extremely difficult.
- Insurers have suffered significantly larger losses in timber framed buildings than they would have expected in traditional buildings – including some total losses.
- Some insurers apply increased rates to timber framed buildings.

28

28


Timber framed block of flats under construction, showing oriented strand board and frame.

29


Timber framed block of flats under construction, shows polyisocyanurate insulation being installed within the wall construction.

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Timber framed block of flats under construction, shows plasterboard being installed over the insulation, oriented strand board and frame.

31

"Timber framed" building fire

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32

"Timber framed" building fire

Timber framed block of twelve flats in Pankhurst Avenue Brighton destroyed by fire 2019.

33

What do insurers mean when they ask if a building is listed?

- Grade I, Grade II or Grade II* listed buildings are buildings of special architectural and / or historic interest.
- Listing ensures the building is considered by the planning system, so that it is protected for future generations.
- The older a building is, and the fewer the surviving examples of its kind, the more likely it is to be listed.
- You can check if a building is listed here: https://historicengland.org.uk/listing/the-list

Uppark House in West Sussex.

34

Why do insurers want to know if a building is listed?

- Listed buildings are often more vulnerable to the effects of fire, heat and water.
- Increased costs of repair are likely – traditional materials and tradesmen are more expensive than modern materials and techniques.
- Planning delays frequently occur as English Heritage etc. have to be consulted.

NB It took the National Trust more than 5 years to repair Uppark House following the 1989 fire.

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35

Why do insurers ask about flat roofs?

- Water leaks are more common in flat roofs than traditional pitched roofs.
- Flat roofs:
  - Drain less effectively
  - Have greater maintenance needs
  - Shorter lifespan
  - Effective sealing can be problematic
  - Generally more expensive to repair and maintain.
- Insurers often apply flat roof maintenance conditions requiring annual inspection by a "competent builder" once the flat roof reaches a certain age (say, 7 or 10 years).

36

36

Why do insurers ask about electrical inspections and IET test certificates?

- Many fires are started by electrical defects (20-30% of all fires).
- So, insurers want to know that electrical systems are being properly maintained.
- Regular testing is an important part of any maintenance programme.
- The IET (Institution of Engineering & Technology) issue the national standards that all electrical installations need to conform to.
- The IET were previously known as the IEE and some insurers still refer to them as the IEE.

37

37

What do clients need to do about electrical testing then?

- They need to use a competent electrician for all electrical work and testing.
  - NICEIC, ECA and SELECT approved companies will be acceptable to most insurers.
  - There are others, but not all will be acceptable.
  - NAPIT (Commercial) for example will be acceptable to some but not others.
- For new systems - an *Electrical Installation Certificate* should be issued by the electrician.
- Then periodic inspection and testing is necessary - normally every 3 or 5 years.
- After inspection and testing, electrician will issue an *Electrical Installation Condition Report* (EICR) showing the system as "Satisfactory"…or "Unsatisfactory".
- If unsatisfactory, there will also be a list of defects that need to be rectified.

38

38

Question:04

True or false, periodic testing of fixed electrical installations is also known as PAT Testing?

a) True

b) False

39

39

Insurers often ask about portable heaters – what do they mean?

- Portable heaters are heaters that are not fixed permanently to the building structure, so can be moved from one part of the building to another as needed.
- They often have their own fuel supply (e.g. LPG, oil, paraffin etc.) but may be electrical.

40

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More examples of portable heaters

41

41

Why are insurers concerned about portable heaters?

- They can be placed too close to stock or other combustible materials or combustible items can be placed on them.
- They can be accidentally knocked over.
- Accidents can happen during refilling with fuel.
- Generally they will be considered unsuitable for locations where the are significant combustible stocks and / or congested environments.
- They may not be acceptable to insurers at all or only acceptable in low hazard environments and / or for a temporary period.

42

42

What is Fork Lift Truck Battery Recharging?

- Electrically powered forklift trucks are powered by a battery that needs periodic recharging.
- This does not apply to LPG and diesel powered forklift trucks.

43

43

Why are insurers concerned about Forklift Truck Battery Recharging?

- There is potential for electrical defects resulting in fires.
- Fires can be devastating because recharging is often carried out after working hours, when the premises are unattended.
- Hydrogen emitted during the recharging could be ignited
- There is a history of fires from Forklift Truck Battery Recharging.

44

44

Flammable substances

- Insurers will want to know about flammable substances.
- They are a concern to insurers because they will easily ignite and burn when brought into contact with an ignition source.
- Insurers will often specifically ask about:
  - Flammable liquids
  - Flammable gases.

45

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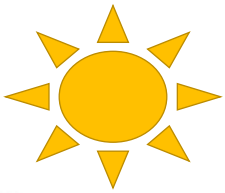
Flammable Liquids

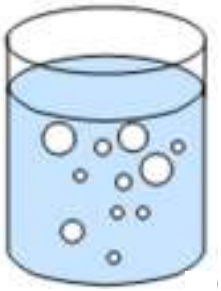
- Insurers will be mainly concerned about **Highly flammable Liquids** – those with a flashpoint below 32°C.
- They may also be interested in other **Flammable Liquids** – those with a flashpoint between 32°C and 55°C.

46

What does flash point mean?

- "Flash point" is the lowest temperature at which a flammable liquid will form a vapour in the air, near its surface that will briefly ignite, on exposure to a flame.
- Not to be confused with the autoignition temperature (which is the temperature which causes spontaneous ignition).





As the temperature rises, the amount of vapour coming from the flammable liquid increases.

47

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Question:05

Which is more hazardous?

a) A flammable liquid with a flash point of 55°C

b) A flammable liquid with a flash point of 32°C?

c) A flammable liquid with a flash point of 12°C?

48

48

Flammable Gases

- Flammable gases are gases that are explosive when they are mixed with air or oxygen in the right proportions.
- Common examples include propane, hydrogen, butane, methane, ethylene, acetylene and ammonia.
- Flammable gases are usually stored under pressure in cylinders; a small leak can result in a significant volume of gas escaping.
- Insurers therefore expect appropriate safety precautions to be put in place.

49

49

Insurers often ask about fire alarms but when do they require them?

- Fire alarms are rarely required by property insurers.
- Systems are normally installed to protect lives.
- Insurers would expect a *Fire Risk Assessment* to be undertaken and this will determine whether a fire alarm is needed.
- Small, simple, single storey premises are unlikely to need a fire alarm.

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Do insurers also require portable fire extinguishers?

- Again a *Fire Risk Assessment* should be undertaken to determine what is needed.
- Insurers will expect portable fire extinguishers to be provided, although some may offer a small premium reduction when they are available.
- Some insurers have policy conditions requiring *wet chemical extinguishers (also called Class F Extinguishers)* where there is frying.

51

51

Question:06

Who should usually carry out the fire risk assessment?

a) The local Fire Officer
b) A representative of the employer
c) A representative of the landlord
d) None of the above

52

52

Summary – insurers' basic fire protection requirements

- Fire protection requirements including the need for fire alarms and fire fighting equipment is determined by a fire risk assessment.
- In England, the legislation covering this is the Regulatory Reform (Fire Safety) Order 2005; see http://www.hse.gov.uk/toolbox/fire.htm
- The responsibility for carry out a fire risk assessment usually sits with Employer (but building owners and others may also have responsibility).
- The person undertaking assessment must be competent.
- For more complex sites, specialists are needed - see https://www.ife.org.uk
- The Fire & Rescue Service may visit premises from time to time because they are responsible for enforcing legislation but they will not undertake the assessment.

53

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54

54

Information sources:
RISC Authority - www.riscauthority.co.uk
HSE: www.hse.gov.uk
The IET: www.theiet.org

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55