

Neutral Citation Number: [2011] EWHC 250 (Ch)

Case No: HC09C01587
HC09C01611

IN THE HIGH COURT OF JUSTICE
CHANCERY DIVISION
INTELLECTUAL PROPERTY

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 21/02/2011

Before:

MR. JUSTICE KITCHIN

Between:

(1) KINGSPAN GROUP PLC
(2) KINGSPAN HOLDINGS (IRL) LIMITED **Claimants**
- and -
ROCKWOOL LIMITED **Defendant**

And between :

ROCKWOOL LIMITED **Claimant**
- and -
KINGSPAN GROUP PLC **Defendant**

Mr. Henry Carr QC and Mr. Michael Hicks (instructed by **Messrs. Wragge & Co LLP**)
appeared for Kingspan
Mr. Michael Silverleaf QC and Miss Emma Himsworth (instructed by Messrs. Herbert
Smith LLP) appeared for Rockwool

Hearing dates: 10, 13, 14, 15, 16, 20, 21 December 2010

Judgment

MR. JUSTICE KITCHIN :

Introduction

1. These actions for infringement of registered trade mark, malicious falsehood and declaratory relief concern insulating boards and panels for use in the construction industry. Two important categories of such products are those made with plastic foams and those made with mineral wool. The advantage of insulation products made with plastic foams is that they have good insulation values which means they can be relatively thin; but they suffer from the disadvantage that plastic foams are combustible. The advantage of insulation products made with mineral wool is that

mineral wool is inherently incombustible; but they suffer from the disadvantage that such products have relatively poor insulation values which means that they tend to be relatively thick.

2. The first claimant in action HC09C01587 is the holding company of a group of companies (collectively “Kingspan”) which includes the second claimant. Kingspan makes a wide range of construction products including insulation boards and panels for use in ceiling and wall constructions and it operates a very successful business in the UK and throughout the world with an annual turnover of about € 1,125 million. Kingspan’s insulation boards and panels are made with plastic foams.
3. The defendant (“Rockwool”) is a member of the Rockwool group of companies and the world’s leading producer of a mineral wool called stone wool which is used both in its own products and as the insulating core of panels made and sold by a number of companies including Eurobond.
4. The dispute concerns a promotional campaign conducted by Rockwool consisting of road shows and videos. Kingspan contends that the campaign has represented that three of its products are a fire hazard and are unsafe in a real building and that these representations are false and misleading. It alleges that Rockwool has thereby infringed its registered trade marks and is liable for malicious falsehood. It also seeks certain declarations of fact to the effect that Rockwool’s campaign contains misrepresentations concerning its products.
5. Rockwool counters that it has subjected some of its own products and those of Kingspan to an internationally established standard reaction to fire test (ISO 9705) in order to demonstrate the difference in performance in this test between insulating boards and panels made with combustible materials and ones made with incombustible materials. It says it was scrupulous in selecting the test and in having it carried out by a leading international testing laboratory to ensure it was fair, independent and rigorously performed. The difference in results is, it says, striking and shows that products made with incombustible materials are substantially more resistant to direct attack by flames than those made with combustible materials. Rockwool continues that it is entitled to show the results of the test to the trade and to demonstrate the fire reaction properties of the products at road shows, particularly since Kingspan has marketed its products as “fire safe”. Accordingly it seeks declarations to this effect, and these are the subject of the second action HC09C01611.
6. The Kingspan products used in the promotional campaign are:
 - i) Kingspan TR 26 (“TR 26”), an insulation roof board designed and intended for use in the construction of flat roofs. It comprises a polyisocyanurate (“PIR”) foam core with an upper and lower foil facing. It is fitted above the deck of the roof, that is to say on the external surface. The deck itself may be made of steel, concrete or, occasionally, wood. A weatherproofing membrane is then applied to the external surface of the board. TR 26 is not intended for use on the internal surface of a ceiling or wall.
 - ii) Kingspan K11 Kooltherm (“K11”), another insulation roof board designed and intended for use in the construction of flat roofs in much the same way as

TR26. It comprises a phenolic foam core with an upper facing of bitumen coated perlite board and a lower facing of glass tissue. It is again fitted above the deck of the roof and a weather proofing membrane is applied to its external surface. Like TR 26, K11 is not intended for use on the internal surface of a ceiling or wall.

- iii) Kingspan KS1000 MR (“KS1000 MR”), an external wall panel. It comprises two sheets of steel and a PIR foam core. The panels are fitted together by means of an interlocking joint arrangement, one side of the panel forming the male part of the joint and the other the female part of the joint. In use, the panels are secured to a secondary steel frame by means of fasteners which pass from the external surface of the panel, through the male joint and into the steel frame. Flashings are then placed over and around the corners and joints of the construction, both internally and externally. KS1000 MR panels are used in a wide variety of applications including warehouses, factories, schools, hospitals and residential buildings. In the majority but by no means all of these applications the panels have a complete covering on their internal facing side, usually of plasterboard. Where the construction is not industrial or a warehouse, it will generally comprise a series of rooms within the outer frame. In such an arrangement, because the panels are fitted as external walls, they will only be used on two walls of a room at most and then form the external surface rather than the internal surface. KS1000 MR panels are never used in ceiling assemblies.

Regulatory framework

7. In the course of the trial I heard evidence from two expert witnesses, Mr Peter Jackman on behalf of Kingspan and Dr Vytenis Babrauskas on behalf of Rockwool. Both are well qualified and have extensive experience of the regulatory and technical aspects of fire safety engineering. Perhaps not surprisingly, there was a good deal of agreement between them, at least as to the relevant technical and regulatory background to this dispute. Much of what follows in this section of the judgment is drawn from their reports.
8. Fire is undoubtedly a complex phenomenon and it is recognised that its behaviour and effects depend upon a number of interrelated factors. Fires in buildings generally start from one object that ignites and burns. If the fire is not extinguished and spreads to other combustible materials then, over a period of a few seconds, its character may change and instead of being relatively localised it may fill an entire room. This condition is called “flashover” and is recognised as being extremely dangerous. Before flashover, a fire will generally have only a limited effect on the structural elements of a building. But after flashover, if the fire continues, then the structural elements may well become compromised or fail entirely. Flashover is also likely to be fatal to any occupants.
9. The consequences of fire are so severe and the behaviour of fire is so complex that over the years researchers and regulators have carried out a great deal of work to find ways to assess the properties and performance of construction materials. The result has been a myriad of tests, standards and regulations. Traditionally, construction materials were regulated domestically. More recently, attempts have been made to produce a harmonised regulatory regime across the European Union. But

harmonisation is not yet complete with the result that manufacturers may mark their products as having been approved under the domestic scheme, the European Union scheme, or both. In addition, the insurance industry often requires particular levels of performance assessed by reference to a yet further set of standards. I must give an outline of each of these schemes, so far as relevant.

10. European regulation is founded on the Construction Products Directive 89/106/EEC (“CPD”) which established a requirement for harmonised standards. This was followed by a series of interpretative documents and decisions issued by the European Commission following consultation with industry and other interested parties. Interpretative Document 2 concerning safety in fire was issued by the European Commission in 1994 and this was followed later in the same year by Decision 94/61/EEC. These recognised the need for suitable tests for the classification of construction materials by their reaction to fire.
11. Thereafter a considerable amount of work was done by the EC Fire Regulators Group (“FRG”) and the Official Laboratories Group (“OLG”) to develop what is known as the Euroclasses classification system and establish its class boundaries, and to develop and validate a test known as the Single Burning Item (“SBI”) test. This is a relatively small scale test in which two pieces of an item to be tested are placed together in an “L” arrangement. The specimen is exposed to a burner and various aspects of its reaction to fire are recorded. The SBI test is now the subject of European (EN) standard 13823.
12. The work carried out by the FRG and the OLG relied heavily on an existing test the subject of international standard, ISO 9705. As I shall elaborate, this is a test which was developed in the 1980s by a number of laboratories, including SP Technical Research Institute of Sweden (“SP”), to determine the reaction to fire of construction materials used as surface products in buildings. The FRG used the ISO 9705 test to establish the basis for ranking products in the Euroclasses system and to define its seven classes, from A1 to F, ranging from entirely incombustible (A) to highly combustible (E) and untested (F). Subsequently the OLG carried out a series of experiments to determine the reliability of the SBI test, to confirm that the results corresponded well with those obtained using the ISO 9705 test (which was the case for all but four kinds of products) and to set the precise boundaries of each of the Euroclasses based upon the time to flashover in the ISO 9705 test.
13. On 8 February 2000, the European Commission issued Decision 2000/147/EC (“the Euroclasses Decision”) which superseded Decision 94/611/EC and implemented the new classification system.
14. Article 1 of the Euroclasses Decision provides:
 1. When the end-use application of a construction product is such that it may contribute to the generation of fire and smoke ... the product shall be classified on the basis of its reaction to fire performance, having regard to the classification system set out in Tables 1 and 2 of the Annex.
 2. Products shall be considered in relation to their end-use application.

If the classification based on the standardised tests and criteria listed in Tables 1 and 2 of the Annex is not appropriate, one or more reference scenarios (representative scale test(s) typifying agreed hazard scenario(s)) may be called on, within the context of a procedure providing for alternative tests.

15. The relevant tests and classification criteria for each class are set out in Table 1. For classes B to E, the relevant tests are the SBI test and a test the subject of another standard, EN ISO 11925-2. This latter test (“the Small Flame test”) is another relatively small scale test in which a small sample of the material is held vertically in a combustion chamber and exposed to a single flame source.
16. In 2002 the European Commission issued standard EN 13501-1 which sets out the Euroclasses classification system and refers to all appropriate test methods including the SBI test and the Small Flame test. Guidance paper G issued by the European Commission in 2003 makes clear that the classification system foreseen in the Euroclasses Decision is to be considered complete and directly applicable to all products. The only exceptions are where the classification based on the specified small scale tests is not appropriate or where a review of the treatment of some families of products indicates that an amendment of the decision is necessary. These exceptions have no application to any of the products in issue in these proceedings. Therefore ISO 9705 cannot be used for the classification of these products under the Euroclasses system.
17. Products which have been tested in accordance with EN 13501-1 may be CE marked with the appropriate classification. They must be tested as placed on the market but may also be tested in their end use application. CE marking is not currently mandatory in the UK but is expected to become so by 2013. All that is required in the UK is compliance with the domestic building regulations, to which I now turn.
18. In England and Wales fire safety is governed primarily by the Building Regulations 2000 (SI 2000/2531) (“the Building Regulations”). Schedule 1, Part B contains broad requirements for safety in buildings. These include such things as adequate means of escape in the event of fire, adequate means for the control of fire spread and the provision of access and facilities for fire fighting. Any building that is constructed in accordance with these requirements is deemed to be fire safe. Because of the broad nature of the requirements, specific guidance is provided in the form of what are called Approved Documents. Guidance as to fire safety is provided in Approved Document B which is divided into two parts; volume 1 relates to dwelling houses and volume 2 relates to other buildings. There is no requirement to follow this guidance but it is generally relied upon by local government inspectors and those involved in building construction and maintenance as providing a base standard. Appendix A to both volumes 1 and 2 sets out specific guidance for the fire performance of materials, products and structures. So, for example, roof constructions are required to resist fire penetration from the outside and fire spread, as demonstrated by their performance in British Standard (BS) 476. Various European and international standards have been adopted for the purposes of classifying products by their reaction to fire and these include EN 13823 (the SBI test) and EN ISO 11925-2 (the Small Flame test). It is of some note that ISO 9705 is not referred to in Approved Document B.

19. The Regulatory Reform (Fire Safety) Order of 2005 (“RRFSO”), which came into force on 1 October 2006, imposes responsibility on the 'responsible person' (usually the owner, employer or occupier of business or industrial premises) to carry out a fire risk assessment. Responsible persons are required, following a risk assessment, to implement appropriate fire safety measures to minimise the risk to life from fire; and to keep the assessment up to date. Designers, specifiers and contractors therefore play an important part in communicating all elements of the design that may affect the fire risk assessment.
20. Finally, requirements are imposed by the insurance industry on those who wish to secure insurance protection against the consequences of fire. So far as cladding and sandwich panels are concerned, UK insurers require products to be subjected to the Loss Prevention Standards LPS 1181 test developed by the Loss Prevention Certification Board (“LPCB”). Many US insurers and some UK insurers also require certification by Factory Mutual Approvals (“FMA”), a part of FM Global Insurance Company, which provides product certification services. So far as cladding and insulation panels are concerned, the relevant FMA test standards are FM 4880, 4450 and 4470.

Reaction to fire performance of the Kingspan products

21. The Kingspan products in issue have been tested in accordance with the various regimes I have described.
22. The TR 26 roof board has been tested under BS 476 in accordance with the Building Regulations as part of a roof assembly in its intended manner of use and has achieved the highest possible national rating of Class 0. It has also been tested in accordance with EN 13501-1 to secure a CE classification and for that purpose been subjected to the EN ISO 11925-2 (Small Flame) and EN 13823 (SBI) tests both as placed on the market and in end use application. As placed on the market it has a classification of E (indicating it is highly combustible); but in end use it has a classification of B. It has also met the FMA requirements for Class 1 steel deck roof fire performance (the highest available) when subjected to FM 4450 and 4470 tests, and has satisfied the criteria of LPS 1181, in all cases as part of its intended assembly.
23. The K11 roof board has achieved a Class 0 rating when tested as part of a roof assembly in accordance with BS 476 for the purposes of the Building Regulations. In accordance with EN 13501-1, K11 has been tested under the EN ISO 11925-2 (Small Flame) and EN 13823 (SBI) standards. As placed on the market, it has a classification of C. K11 has not been tested under either the FMA 4450 or LPS 1181 standards as there is currently no commercial requirement for this product in the markets to which these insurance certifications relate.
24. The KS1000 MR wall panel has also achieved a Class 0 rating when tested in accordance with BS 476 for the purposes of the Building Regulations. Once again, in accordance with EN 13501, KS1000 MR has been tested under the EN ISO 11925-2 (Small Flame) and EN 13823 (SBI) standards. As placed on the market, it has a classification of B, the highest such rating achievable for a product which incorporates an organic insulation material. KS1000 MR has also been subjected to the LPS 1181 testing regime and has satisfied the relevant test criteria, and it has been tested and approved by FMA applying the FM 4880 standard.

25. Rockwool says that it was never its intention to suggest that Kingspan's products were unsafe and it would have been wrong to suggest that they were. I must therefore approach the issues in this case on the basis that Kingspan's products are safe when used in the manner for which they are designed and intended.

ISO 9705

26. Before relating the genesis and development of the promotional campaign which led to the issue of these proceedings, I must explain a little more about the ISO 9705 standard on which the most important tests used in the campaign are said to be based.

27. In the late 1970s and early 1980s it became clear that a standardised fire test was needed for determining the reaction to fire characteristics of a range of products. It was thought that products used to line walls and ceilings were best tested in a full scale room and after a good deal of development work carried out predominantly by SP but also by other laboratories in the UK and the USA, ISO 9705 was published in 1993.

28. ISO 9705 specifies a test method for surface products that simulates a fire that starts in a corner of a small room. It is intended to evaluate the contribution to fire growth provided by a surface product using a specified ignition source and provides data concerning the early stages of a fire from ignition up to flashover.

29. Section 1 is concerned with scope and states:

“This International Standard specifies a test method that simulates a fire that under well ventilated conditions starts in a corner of a small room with a single open doorway.

The method is intended to evaluate the contribution to fire growth provided by a surface product using a specified ignition source.

....

The method is not intended to evaluate the fire performance of a product.”

30. The standard defines a surface product in paragraph 3.7 as:

“any part of a building that constitutes an exposed surface on the interior walls and/or the ceiling such as panels, tiles, boards, wall papers, sprayed or brushed coatings”

31. The test is carried out in a standard room 2.4m wide, 3.6m deep and 2.4m high with a door in the front wall. A burner is placed in a corner of the room opposite the door and produces a heat output of 100kW for 10 minutes and then 300kW for a further 10 minutes.

32. The product to be tested must, so far as possible, be mounted in the same way as it would be in its intended use. In this regard, paragraph 11 states:

“11.1 The product to be tested shall, so far as possible, be mounted in the same way as in practical use.

11.2 In cases where the product to be tested is in board form, the normal width, length and thickness of the boards shall be used so far as possible.

11.3 The product shall be attached either to a substrate or directly to the interior of the fire room. The mounting technique (for example, nailing, gluing, using a support system) shall, as far as possible, conform to that used for the product....”

33. In order to achieve comparable test data between laboratories, it is recommended that the walls (excluding the front wall containing the doorway) and the ceiling are covered with the product. This is designated as the standard configuration. But it is recognised that different configurations are possible depending on how the product is used in practice. So it may be appropriate to test the product covering only the walls and having standard ceiling materials, or to test the product covering only the ceiling and having standard wall materials.
34. As the test is run, data are gathered relating to aspects of the product’s reaction to fire and observations are made as to when the ceiling ignites, flames spread on the wall and ceiling surfaces and flames emerge from the doorway. The test ends on flashover or after 20 minutes, whichever occurs first.
35. There was some dispute between the experts as to how well known the ISO 9705 standard test is and how extensively it is used. Mr Jackman said it is not well known or widely used. Dr Babrauskas said the opposite. I prefer the evidence of Mr Jackman.
36. Mr Jackman explained that ISO 9705 is not a test which he has ever been asked to perform in connection with any kind of fire assessment; it is not a test which, to his knowledge, is used in the UK or elsewhere in Europe; it is not required under UK legislation; and it does not provide any form of certification linked to the Euroclasses or CE marking. Further, although Mr Jackman has looked at numerous roof board and wall panel products, he has not been able to find a single one which is described as having been tested under ISO 9705. Save for the tests carried out for the purposes of these proceedings, none of the Kingspan or Rockwool products in issue has ever been tested under ISO 9705.
37. Dr Babrauskas stated in his report that the ISO 9705 test is the only large-scale reaction to fire test which is used throughout Europe and that it is in widespread use. But under cross examination it became clear that he was referring to its use in research laboratories and accepted that it had only rarely been used by commercial manufacturers, and they were in Iceland. He was not able to identify any commercially available construction products tested under ISO 9705 save for some used in ship building.

The promotional campaign - general

38. Rockwool, as the world’s leading producer of stone wool, regularly tests its own products and those of its competitors for fire performance. Over the years it has found

that one effective way of taking the results of these tests to the market is by way of fire road shows. The nature of fire road shows is such that it is not practicable to conduct large scale tests since they must be undertaken in laboratories and they are also extremely expensive. Small scale demonstrations can, however, be performed and, though they cannot be conducted in accordance with proper test conditions, Rockwool considers they can be used as a tool to demonstrate the likely fire performance of products. Accordingly, Rockwool's policy has been to carry out small scale demonstrations but to support them with official large scale tests.

39. The origin of the particular road shows and other promotional activities of which Kingspan complain was explained to me by Mr Bugge Garn, the Vice President of Group Public Affairs and Market Intelligence. In 2006, Rockwool considered that misunderstandings had developed in the European market about the term "fire safe" and it wanted to show the real difference between incombustible "fire safe" products (such as those based on stone wool) and those which are combustible but are nevertheless labelled "fire safe". It thought a good way to do this was to organise in Europe a series of fire road shows.
40. Rockwool management therefore set up the Foam Strategy Group ("FSG") which in turn set up a working group called HOA. Mr Bugge Garn was a member of the FSG and chairman of HOA. A series of conference calls and meetings took place in April and May 2007 in which ideas for the proposed road shows were developed. In summary it was decided to carry out a reduced scale version of the ISO 9705 test and a small flame demonstration based upon the EN ISO 11952-2 test. The ISO 9705 test was considered an appropriate test upon which to base this reduced scale test (termed the small room corner demonstration) because it was used as the reference test for the Euroclasses system. As I shall explain, it was also appreciated that the use of combustible products in the small room corner demonstration would produce a vivid display of flashover. In accordance with Rockwool's general policy and because the road show demonstrations could not be wholly accurate representations of official tests by reason of their size, HOA also considered it appropriate to commission official ISO 9705 tests and to make the results available to their road show audiences.
41. Mr Hans Schreuder, the Managing Director of Rockwool, and Mr Nicholas Ralph, the Technical Marketing Manager of Rockwool, were also members of HOA. Mr Schreuder decided the planned fire road shows should also take place in the UK and he delegated the technical aspects of their delivery to Mr Ralph and the marketing aspects of contacting customers to his then Marketing Director, Mr Brian Roberts. Both Mr Schreuder and Mr Ralph recognised that Kingspan was Rockwool's major competitor in the UK and the market leader in the UK plastic foam industry. They explained to me that they were concerned by the general use of the term "fire safe". Rockwool used the term in its marketing, in their view entirely properly because its products are incombustible. They understood that Kingspan also used the term but they considered this was potentially misleading because its products are not truly incombustible. They therefore decided the UK demonstrations should show the relative fire performance of comparable Rockwool and Kingspan products. They were confident that when subjected to fair and objective fire performance tests the difference between combustibility and incombustibility would become clear. They maintained it was not their intention to suggest that Kingspan products were not safe, but rather to market Rockwool's products effectively and ensure that decision makers

and relevant authorities in the construction industry were sufficiently well informed to make factually sound decisions. Mr Schreuder wanted the road shows (and so also, I infer, the supporting videos) to be open to Rockwool's competitors, the construction media and construction industry decision makers, by which he meant all those people in the construction industry who specify or influence the specification of building materials to be used in a project and who would be aware of the Building Regulations, such as quantity surveyors, architects, builders and insurers. Mr Schreuder explained in cross examination that such persons would have a range of knowledge about fire regulations, with some knowing a good deal and others knowing very little about, for example, the RRFSo or the requirements for CE marking.

42. It is clear that by May 2007 some practical demonstrations of the possible tests for the road shows had been carried out for the FSG. Minutes of a meeting of the FSG on 3 May 2007 state:

“In the five mini room corner tests the following products will be tested:

1. Kingspan sandwich panel
2. Sandwich panel based upon rock wool core (Eurobond)
3. Rockwool DuoRock roof board
4. Kingspan TR26 polyisocyanurate
5. Kingspan Kooltherm phenolic foam roof board

The above tests will show that sandwich panels based on polyisocyanurate foam will result in rather quick flashover and that the naked polyisocyanurate foam will go to flashover within a few seconds. These tests compared to the rock wool based sandwich panel and the Rockwool roof board will show that the choice is a “black and white issue”.

The idea of testing phenolic foam roof board is to show that even the best possible foam composition will result in flashover and uncontrollable fires.”

43. As Mr Bugge Garn accepted, Rockwool wanted to show that even the best Kingspan products would result in uncontrollable fires and how quickly combustible products can go to flashover in a room situation. This would make the choice between the products a “black and white” issue.
44. A further insight into Rockwool's intentions in respect of the UK road shows can be gained from a business plan produced in September 2007 and approved by Mr Schreuder. This included the following objectives:

“(a) Demonstrate in a visual manner the difference between combustible and non-combustible insulation when exposed to a realistic fire scenario in a building.

....

(c) To convince attendees of the dangers of using combustible insulation in buildings – and to be aware of the real facts.

....

(e) Remind attendees that under the RRO [the RRFSo] they are responsible for assessment of the fire risk in their buildings, and liable for the consequences.”

45. It will be noted these objectives included the demonstration of what would be perceived to be a realistic fire scenario and a convincing display of the dangers of using combustible products. It is also clear from the body of the document that these objectives were targeted at Kingspan, as Mr Schreuder accepted in cross examination.
46. Mr Ralph was responsible for overseeing detailed aspects of the UK road shows including the sourcing of the products to be tested; the script of the accompanying commentary; the official large scale tests to be carried out to support the demonstrations and ensuring that a video recording of the large scale tests was available as background information. He delegated the implementation of the practical requirements of delivering the fire demonstrations at the road shows to Mr Lawrence Cody, a Technical Marketing Consultant at Rockwool.
47. On 10 May 2007, Mr Ralph asked Mr David Beard (at that time the Business Manager of Fire at Rockwool) to provide a list of specific products to be used in the demonstrations and in the large scale supporting tests. In relation to panels, he in turn sought advice from Mr Bob Cordall (the Manager responsible for Panel Systems), he being the person best placed to identify equivalent competing Kingspan and Rockwool products on the UK market. Mr Cordall’s recommendations for external panels were the Eurobond Europanel which is a steel faced sandwich panel with a core of Rockwool insulation and which is commonly used to clad commercial buildings, and the Kingspan KS 1000 MR panel with the PIR core. As for roof insulation boards, Mr Beard recommended Kingspan’s TR 26 as the PIR roof board, K11 as the phenolic foam roof board and Rockwool’s DuoRock as the stone wool roof board. All of these were agreed by Mr Ralph and subsequently by HOA.
48. In early July 2007, Mr Cody attended a training session at Rockwool’s factory at Roermond in the Netherlands to familiarise himself with the equipment and procedures; he developed a manual for both the small flame demonstrations and small room corner demonstrations which set out the procedures for carrying out the tests, the sequencing for the products tested and health and safety instructions; he acquired the necessary rigs from Holland and made what he considered to be appropriate modifications; he checked the script to be used by the presenters and made suggestions for improvement to Mr Ralph; he asked Dr Cooke (an independent Fire Safety Consultant) to attend a training day and to comment on the proposed demonstrations; and he sourced the products to be used in all the tests.
49. The road shows were held from October 2007 to October 2008. A draft script was prepared by Mr Rob Noble (then Sales Manager for Rockwool) with input from Mr Ralph and Mr Cody. IAS Smarts, Rockwool’s PR agency, was responsible for

finalising the script and instructing the presenter subject to Mr Ralph's approval. The script was modified for each event though its substantive message remained the same.

50. In the meantime, in about May 2007, Mr Bugge Garn asked Ms Birgitte Messerschmidt (a fire safety consultant for Rockwool) to assist with the arrangement of the large scale tests.
51. Ms Messerschmidt first contacted the Building Research Establishment ("BRE"), a fire testing laboratory based in the UK. But BRE had a policy of not testing competitors' products. SP was Ms Messerschmidt's next choice. This is recognised as being one of the finest fire laboratories in the world and a leading international research institute. It is a limited not-for-profit company wholly owned by the Swedish state.
52. In June 2007, Ms Messerschmidt contacted Professor Björn Sundström, the Deputy Head of the SP Fire Department, to ask him whether the ISO 9705 or the EN 14390 (its European version) should be used. Professor Sundström recommended the ISO 9705 test because EN 14390 states that it may not be suitable for some free standing products. In light of this advice and her own view that ISO 9705 was more appropriate because it was the large scale reference test used in the development of the Euroclasses system, Ms Messerschmidt decided to go for the ISO 9705 test. She therefore asked SP to follow the ISO 9705 standard and said it was important they did not vary from it. Professor Sundström asked Dr Patrik Johansson, a project manager in SP's Fire Dynamics section, to provide Rockwool with a quotation and to arrange and manage the required tests.
53. Whilst SP was comfortable testing competitors' products and for the tests to be filmed, it did not want its name to appear in the film or for the product names to appear in its report. It therefore required the products to be tested to be designated by letters of the alphabet. Rockwool designated the products as follows:
 - i) Product A: Rockwool's DuoRock roof board comprising stone wool;
 - ii) Product B: Kingspan's TR 26 roof board comprising PIR;
 - iii) Product C: Kingspan's K11 roof board comprising phenolic foam;
 - iv) Product D: Eurobond's Europanel sandwich panel comprising stone wool; and
 - v) Product E: Kingspan's KS1000 MR sandwich panel comprising PIR.
54. Ms Messerschmidt was also aware of a debate during European standardisation discussions as to whether ISO 9705 was the most appropriate test for sandwich panels such as KS1000 MR. This led ISO to develop another test, ISO 13784-1, specifically for sandwich panels where the test is conducted with the panel mounted free standing on a metal frame. This did not, however, alter Ms Messerschmidt's view that it was appropriate to use the ISO 9705 test for the promotional campaign because the Euroclasses system currently remains applicable to sandwich panels such as KS1000 MR. Nevertheless, for her own interest, and for use in European discussions about standards, she decided to ask SP also to perform the ISO 13784-1 test.

55. Ms Messerschmidt knew that ISO 9705 stipulates the internal dimensions of the test room and that the product to be tested must be mounted as far as possible in the same way as in actual use. She appreciated that one option would have been for Rockwool employees to do the mounting but considered SP was better suited to the job. She therefore asked Dr Johansson for advice. He responded with what he regarded as the most important details and advised that if no other information was available then the information given for mounting the products in the EN 13823 (SBI) standard should be used.
56. Mr Cody assisted Ms Messerschmidt to gather as much information as possible as to how the various panels and boards were normally fixed in practice and Ms Messerschmidt then prepared detailed mounting and fixing instructions and sent them to Dr Johansson. He regarded them as relatively straightforward and did not request any further information. They were reviewed by Mr Thuresen, a Technical Manager in the Fire Dynamics department at SP, and were duly used subject to some minor modifications.
57. In accordance with the standard option described in ISO 9705 (and the one used to develop the Euroclassification system), the test products were applied to three walls and the ceiling of the test room. Ms Messerschmidt instructed SP to mount all the products so that their internal sides faced the burner during testing because, she said, it is the internal side of the panel which is exposed to a fire within a room. She felt this was appropriate because, for the purposes of CE marking and classification according to EN 13501-1, it is compulsory to test products as placed on the market in order to evaluate fire behaviour. She also considered that another advantage of testing products as placed on the market was that it was possible that products could form an exposed surface of an interior wall at a stage during the building process or if not installed as intended.
58. Each product was tested by SP under the same conditions. Both Dr Johansson and Mr Thuresen considered all the tests complied with ISO 9705. Nevertheless, the following points must be noted at this stage. As I have explained, ISO 9705 is a test for surface products. Indeed SP's own published information sheet on the standard says it is a large scale room test for "*surface layers*" and "*surface linings*". This, as Dr Johansson accepted in cross examination, means it is designed for and concerned with products which, when installed, constitute an exposed surface on the interior walls or ceiling of a part of a building. The information sheet also says "*the method evaluates the fire characteristics of a surface product in a room fire scenario. The field of application is for building products that, for some reason, cannot be tested in the small scale*". None of this applies to the Kingspan products in issue because the TR26 and K11 external roof boards are not surface products and the KS1000 MR panel can be tested on the small scale. Moreover, it is in fact possible to test a roof insulation board as part of a roof deck assembly in an ISO 9705 sized room, and SP has done exactly that for another client called BING, as a document disclosed by Rockwool shows.
59. Minutes of a meeting of HOA on 17 August 2007 reveal that by this time a professional film crew had been hired to videotape the SP tests. HOA agreed that two types of video should be produced, one "9/11" version which would show the results of the SP tests in popular form, and one more technically oriented version. In light of the evidence of Mr Bugge Garn, to whom these minutes were put in cross

examination, I am satisfied that Rockwool called the popular version the “9/11” version because it would be shorter and focused on the start of the test, any increase in ignition load and then flashover with flames pouring out of the test room.

60. In the event, only the “9/11” version of the video was produced. Master Media filmed the full sale tests and sent the footage to Ms Messerschmidt. She selected approximately two minutes of footage for each product, prepared technical notes for the voiceover and arranged for the production of the complete video, which she received on 5 October 2007. All of these activities were overseen by Mr Ralph.
61. This early version of the video (the “2007 Video”) was shown without sound at the 2007 road shows. Rockwool claim it has not been distributed, though this is disputed by Kingspan and is a matter to which I must return later in this judgment. The Kingspan and Kooltherm trade marks are used in the voiceover though not in the film footage itself.
62. The 2007 Video was superseded by a second version (referred to in these proceedings as “the First Video”). This was reviewed by Professor Sundström who confirmed that the tests shown had been carried out by SP according to the ISO 9705 standard. Like the 2007 Video, it contains references to the Kingspan and Kooltherm trade marks in the voiceover, though not in the film footage itself.
63. On 18 April 2008, Rockwool sent the First Video to Kingspan, describing its contents and inviting comments. On 22 April 2008, Kingspan replied itself and by its solicitors objecting to the distribution of the First Video and, shortly thereafter, explained that Kingspan considered it contained false and misleading statements and that its distribution would amount to an infringement of trade mark and malicious falsehood. By letter dated 23 April 2008 Rockwool’s solicitors undertook not to distribute the First Video without giving Kingspan seven days notice. In the event, it has not been distributed.
64. On 15 May 2008, Rockwool’s solicitors wrote to Kingspan’s solicitors informing them of the existence of a third video (referred to in these proceedings as the “Second Video”). This is a modified version of the First Video in which all references to Kingspan and Kooltherm have been removed. In addition, all the references to and footage of the testing of the K11 phenolic foam roof board have also been removed because it was thought certain aspects of this product might be unique to Kingspan and that it might therefore have been possible to identify it as a Kingspan product. Subsequently, copies of the Second Video have been distributed to members of the public by post; via Rockwool’s website; in the delegate pack at the autumn 2008 road shows and on the cover of a trade magazine “Roofing and Cladding Insulation” in November 2008.
65. The results of the ISO 9705 tests are apparent from the videos but, in summary, DuoRock and Europanel did not result in flashover and the tests were terminated after 20 minutes, KS1000 MR went to flashover in just under 12 minutes, K11 went to flashover in about 10 minutes and TR 26 went to flashover in about 90 seconds.

The road shows - introduction

66. The first road show took place at Wembley on 17 October 2007. Thereafter further road shows took place at Moreton-in-Marsh on 24 October 2007, at Wembley on 31 January, 17 September and 17 October 2008 and at Silverstone on 2 October 2008.
67. All the road shows had broadly the same format beginning with an introduction by Mr Schreuder or, on one occasion, Mr Ralph on his behalf (17 October 2008). Dr Cooke then gave a presentation at all the road shows except for two (24 October 2007 and 17 October 2008). After the presentation the attendees were directed outside to watch the fire demonstrations. These were narrated by a presenter. The small flame demonstrations were conducted first followed by the small room corner demonstrations. The attendees then returned to a conference suite for a buffet lunch where a video of the ISO 9705 full scale tests was played on a standard sized television in the corner of the room.

The 2007 road shows

68. IAS Smarts prepared the programme, the invitations and the list of attendees. As I have mentioned, Mr Schreuder wanted to make sure the road shows were open to representatives from Rockwool's competitors, the construction media and construction industry specifiers. To ensure the target audience was invited to the events, Mr Schreuder reviewed and approved the list of invitees.
69. Mr Schreuder explained that he was keen to impress upon the attendees that the road show was a demonstration, so in his opening remarks he said they would see:

“...a demo and its aim is to give a representative picture of how these products perform in a large scale test.... We also insist this doesn't reflect how the product is actually configured in the final building but we think it is important that people are aware of the performance of the different products when they come to the design of a building and taking into account the actual performance of a product and taking that seriously when designing a real fire-safe building.”

Dr Cooke's presentation

70. There is no note of what Dr Cooke said at the 2007 road shows but his notes for the January 2008 road show are available. At the request of Rockwool, Dr Cooke had by this time removed all reference to Kingspan trade marks. He had also been asked by Mr Schreuder to make sure he used neutral language.
71. The points he made included these:
- i) He was an independent consultant.
 - ii) Delegates would see real time small compartment fire demonstrations and later a video showing results of ISO 9705 tests sponsored by Rockwool on five different combustible and non-combustible materials or constructions used in the small compartment demonstrations.

- iii) There was a good deal of confusion in the market place resulting from a wide range of materials and a large number of tests and he posed the question as to whether amongst this complexity one could rely on claims implying fire safety for some foams.
 - iv) Fire risk assessment was important and it was best to specify non-combustible.
72. After an explanation of the SBI test and the part played by the reference test ISO 9705, Dr Cooke explained his view of the limitations of the SBI test and that in the ISO 9705 test: “flashover is deemed to be a failure”.
73. His notes then say he should mention:
- “...that a market-leading 75mm thick sandwich panel system with steel faces and a PIR core flashed over in 12 minutes and gave a peak HRR of 2MW at the time of fire extinguishment in the tests made by SP. This used PIR described as Firesafe. The behaviour of plastic foam without a fire protecting barrier is, as expected, far worse.”
74. The notes continue:
- “Some may find today’s demos very surprising. Whatever effect they have on you they should at least demonstrate that it is a travesty to claim that plastic foams used in building context are fire safe.
- To be fair I should mention that some of the materials shown in the demos would not normally be used in the unprotected condition and might be faced with plasterboard or similar. But you cannot always control where insulation materials are used. I recall a recent fire risk assessment I did for a client who built fast track office developments. The architect had specified PIR insulation board with laminated al alum foil faces in the lower floor above the car park in order to conserve heat. With so many combustible services in the void I viewed this as an unacceptable fire risk and recommended that it could only be left in situ if the floor void was further subdivided with f.r. cavity barriers.
- There are fires during construction where cavity wall foam is temporarily exposed to fire and there are many other situations where foam may be a fire hazard.
- There are of course situations where plastic foams can be safely used according to the fire risk present but there are problems: fire test results may be wrongly interpreted, extended applications may be incorrect, insulation materials and sandwich panels may not be secured properly, the use of the building can change, the fire load of the building contents can change and levels of fire safety management can change.
- ”

Active fire precautions, if present, may activate, but fail to control a rapidly growing fire and so on. It will sometimes pay to be prudent and specify non-combustible materials.

At the end of today you will see that you do not have to be a fire expert to see that 'fire safe' claims may be very misleading.

75. A number of points arise in relation to this introduction. The first is that Kingspan has never used the term "fire safe" in relation to its TR 26 or Kooltherm K11 products, a matter which it emerged Mr Ralph had not checked.
76. Second, in ISO 9705 flashover is not deemed to be a failure, as Dr Cooke accepted in cross examination. Nevertheless, flashover is exactly what the attendees would in due course see in the small room corner demonstrations and the video of the performance of the Kingspan products in the ISO 9705 tests.
77. Third, Dr Cooke was plainly inviting the attendees to draw conclusions as to the fire safety in use of the products they were about to see tested. He also made clear his view that it was a "travesty" to claim that plastic foams used in a building context were "fire safe", so plainly suggesting that when used in a building context they were not "fire safe".
78. I recognise that Dr Cooke thereafter qualified his observations by stating that "some" of the materials shown would not normally be used in the unprotected condition and might be faced with plasterboard or the like. But what he did not say was that KS1000 MR is not intended or suitable for use on all the internal walls *and* ceilings of a building or room or that TR 26 and K11 are designed and intended for use as an external roof board installed above a roof deck.

The demonstrations

79. After the presentation, the attendees were taken outside to watch the demonstrations. These were narrated by a presenter. They began with small flame demonstrations and these were followed by the small room corner demonstrations in what Rockwool described internally as "ovens". It is the latter with which this aspect of the claim is really concerned. As in the case of the full scale ISO 9705 tests, the product was installed on the internal walls and ceiling of the room which was 1/8 of the size of an ISO 9705 room. The output from the burner was maintained at 40kW which was disproportionately high. The consequence of this was that, as compared to the ISO 9705 test, the walls and ceiling received excessive heat radiation. As a result, the Kingspan products went to flashover much more quickly than they did in the ISO 9705 tests.
80. There is both a video and transcript of the 17 October 2007 road show so there can be no doubt what was seen and heard. I found it very dramatic. Indeed, Mr Cody accepted the aim of the road shows was to be quite theatrical. The presenter began with this welcome:

"Today we plan to demonstrate, under fire attack, of materials commonly used in the building industry.

Some of these products – all of which are available from merchants throughout the UK and throughout Ireland – carry a marketing label describing them as: ‘Fire Safe’.

So – how safe is the description ‘Fire Safe’? The only way to learn is to subject materials, systems, and products to testing procedures which evaluate their performance in a situation of real fire and then categorise the results into a schedule of performance which represents the integrity of that product in its designed usage.

With today’s simulations we are going to watch some demonstration fires in rigs illustrating some of the real fire risks of installing comparative insulation products in buildings. The difference in performance is for you to witness – and for you to judge.”

81. In fact, as I have mentioned, only KS1000 MR has been described by Kingspan as “fire safe”. More importantly, and contrary to what was said, the tests were not designed to and could not evaluate the performance of the Kingspan products in a situation of real fire and could not produce results or a schedule of performance which represented the integrity of the Kingspan products in their designed usage, as I shall explain. Nor could the rigs illustrate the real fire risks of installing the Kingspan products in buildings.
82. After the small flame demonstrations, the presenter introduced the test rigs for the small room corner demonstrations in this way:

“Each of these five main rigs represents insulation materials set into a building structure –being some of the materials you have already seen in the small scale demonstration.

These ‘Room units’ are going to be lit in sequence so that we can concentrate on the performance of each material as that fire progresses.”
83. Again this implied, contrary to the fact, that the rigs represented how the products to be tested would be installed in a building structure.
84. The first two rigs contained Rockwool DuoRock roof board and Eurobond sandwich panel with a rock wool core. The third contained TR 26 roof board, and this is what the presenter said:

“Room Unit 3 ignited

And so we start our third cubicle. This is another roofing application. This one is the Kingspan TR26 Roof Board polyisocyanurate foam – and this is marketed as fire-safe and has Loss Prevention Council approval. You can see how quickly this product takes up the fire load.

(flashover demo)

Remember too that what we are watching is just a small demonstration room with only a limited quantity of insulant but as building regulations require increased insulation thicknesses this potential fire load will continue to increase.”

85. It is apparent from the video that the TR 26 caught fire very quickly and flashover occurred in about 30 seconds, with flames pouring from the door.
86. As I have said, TR 26 is not marketed as “fire safe”. More seriously, the invitation “to see how quickly this product takes up the fire load” and the warning that “as building regulations require increased insulation thicknesses this potential fire load will continue to increase” gave the misleading impression that this was how TR 26 would perform in a real fire when properly installed, that it was unsafe and that it posed a significantly greater risk for occupants than the Rockwool panels. Moreover it did not, as promised, illustrate the real risks of installing TR 26 as a roof board in the manner for which it was designed, namely above a roof deck and not as an internal surface on the walls or ceiling of a room.
87. The fourth demonstration was of the KS1000 MR sandwich panel. This is what the presenter said after the burner was ignited:

“Next up is a panel, again marketed as ‘Fire safe’.

This is the Kingspan KS 1000 sandwich panel – the core being polyisocyanurate. So this time the material is protected by steel sheeting. Nearly 1 minute and already the dark smoke is appearing.

So, we are now into the 3rd minute of this cubicle and significant smoke development is coming from the door of the rig.

And again I would just remind people of the difference between something labelled ‘Fire Safe’ and a product classed as non-combustible.

These panels produce even greater fire-fighting extinguishing problems – the fire is in the core between the sheets and the water jet partly bounces away!

So if we compare our first four rooms we see how the non-combustible products have avoided increasing the fire danger. The implications, especially regarding escape time, as well as structural damage, are really quite dramatic.”

88. In this case flashover occurred after 3½ minutes with flames emerging from the doorway, considerably faster than the 12 minutes in the full scale ISO 9705 test. Once again, the installation was simply not representative of a real building because the panels were installed on the ceiling and all four walls when in practice they would be

installed on, at most, two walls and not the ceiling; further (though in my view less importantly) they were not fixed to a secondary steel frame and so did not have the stability which such a frame would have afforded. Nevertheless, the presenter suggested, without any proper basis for doing so, that such panels would present significant fire fighting problems and that they presented a fire danger with dramatic implications regarding escape time and structural damage, in each case in contrast to the Rockwool products which were also being tested.

89. The fifth demonstration was of the K11 roof board. Here the presenter said:

“Room Unit 5 ignited

Room unit number 5 is the Kingspan K11 - Phenolic foam.

Again, I'm sure you will all remember the small scale demonstration that we saw a relatively better resistance from the small flame applied to the Phenolic Foam, where it formed as a “char” – perhaps Phenolic is the way forward on the foam products? Just over ½ minute and so far so good. The one that just charred earlier is now well alight.

I think it demonstrates beyond doubt that even the most ‘fire-safe’ category of foam insulation product, which this is, cannot perform comparably with the non-combustible products such as we can still see not burning in units 1 & 2. And really, the only comparison you can make is the very obvious one that the non-combustible option is the only choice if fire safety is one of the key criteria.”

90. Flashover occurred after about 2 ½ minutes, considerably faster than the 10 ½ minutes in the full scale ISO 9705 test. Again, contrary to the suggestion made by the presenter, this has not been marketed as “fire safe”. But more significantly, and just as in the case of the other Kingspan products, the presenter represented that the test provided a relevant demonstration of how the product would behave when installed such that anyone concerned with fire safety must conclude that this product was not safe. This representation was wholly without foundation because the K11 roof board is designed and intended for use as an external roof panel above the roof deck. It is not designed and intended for use as an internal panel on the ceiling and all four walls of a room.

91. The presenter concluded:

“So as we complete our session, it could be worth taking one more look at the ‘Rooms’ which featured a Rockwool Roofing product, and a Eurobond Panel. There is still nothing happening.

So Ladies and Gentlemen, probably the last and most vital question to ask is:- How can you ensure that the insulation materials you specify are truly fire-safe? There's one simple answer: Specify and install non-

combustible products and, for those products where CE marking is possible (which is now for most standard building products) look for the Euroclassification A1 or A2. All Rockwool insulation is non-combustible as defined by BS EN ISO 1182 and all CE marked Rockwool products are in those Euroclasses A1 and A2. That means they are ‘Fire-Safe’ – in other words – it is an accurate description!”

92. Here the presenter represented, contrary to the fact, that the delegates could properly conclude from what they had seen that Rockwool panels are “fire safe” but Kingspan products are not.
93. There is one further aspect of the demonstrations which I should mention. At the two road shows in 2007 and at the January 2008 road show Mr Cody used a rather effective dramatic technique. He had learned in the course of his training in Holland that if he closed the small door of the rigs in the latter part of the demonstration (once the products were fully involved in the fire and flames were issuing from the doorway) then this could promote a visual display in the form of a flashover in the form of a ball of flame when the door was opened. Mr Cody described this as “explosive” and explained it was supposed to reflect the type of situation a fire fighter might have to face; in short it was intended to show the audience that what they were watching was realistic, when of course it was not.
94. The delegates then returned to the conference suite for a buffet lunch. The 2007 Video was played on a standard sized television screen at the side of the room with the sound muted. I must return to this video later in this judgment but would simply say at this stage that it can have done nothing to dispel the impressions created by the demonstrations.
95. In the case of the 2007 road shows, the Kingspan trade mark was visible on the products and the Kingspan and Kooltherm trade marks were used in the voiceover.

The 2008 road shows

96. As I have mentioned, the 2008 road shows followed the same general pattern but with some important modifications.
97. The road show on 31 January 2008 was intended to be a press only event but, as it turned out, space allowed the attendance of other invitees too. The road show on 17 October 2008 was split into two events for two separate audiences: analysts and investors in one and specifiers in the other. The analysts and investors were looked after by Rockwool’s Investor Relations team and Mr Schreuder took the opportunity to have discussions with them about the UK market and the performance of Rockwool.
98. After 2007, Rockwool says, and I accept, that steps were taken to remove any reference to Kingspan and its trade marks in the course of any road show. Nevertheless, in some of the road shows after 2007, at least one of the products could be seen to have Kingspan’s K logo upon it. But, perhaps more importantly, I am satisfied that the attendees of the 2008 road shows would have recognised Kingspan as the likely source of the products being compared to those of Rockwool. I reach this

conclusion for a number of reasons. First, there is Kingspan's position in the UK market, holding as it does about 55% of the PIR roof board market, 80% of the PIR core sandwich panel market and being the only manufacturer of phenolic roof bards in the UK. Second, it was apparent from the cross examination of Mr Bugge Garn, Mr Schreuder and Mr Ralph that the purpose of the campaign was to target Kingspan and I have no doubt they had a well informed understanding as to how to achieve this objective. Third, Mr Schreuder hoped that the financial analysts would challenge Kingspan after the 17 October 2008 road show. As he said in cross examination on day 3 at 519-520:

“Q. It would be obvious to everyone at the demonstration, even the financial analysts, that the rival products that you were testing were Kingspan products, even though you were not using that name.

A. I think being in the UK there is a situation that if you focus on plastic foam products, Kingspan is implicated in that, yes.”

In the case of the phenolic roof board, such a conclusion was not merely obvious but inevitable because Kingspan was the only relevant source of this product.

99. As for the scripts used by the narrator, these varied slightly from road show to road show throughout the campaign. But I should expressly record that the following qualifications were added at the beginning and end of all the road shows carried out in 2008:

“ . . . Whilst what you see today is a demonstration and not an official test, we hope to provide a visual impression of the effects that may be observed when these types of insulation materials are tested in the official ISO 9705 full scale room-corner test . . . ”

“ . . . the demonstration rigs are NOT designed to replicate how the product would be constructed on-site or the product's fire performance in its end-use but they ARE designed to indicate the difference in behaviour between non-combustible and combustible insulation material and composites when directly exposed to a naked flame”

100. Despite these qualifications I am satisfied attendees will have gained much the same misleading impressions from the demonstrations as they did from those in the 2007 road shows.

31 January 2008

101. So, for example, in the January 2008 road show, the narrator included these opening remarks:

“So – how safe is the description ‘Fire Safe’? The only way to learn is to subject materials, systems, and products to testing

procedures which evaluate their performance in a situation of real fire. Then categorise the results into a schedule of performance which represents the integrity of that product in its designed usage – a schedule in which everyone can place trust, designers, constructors, underwriters, legislators, - and users.

With today's simulations we are going to watch some demonstration fires in rigs illustrating some of the real fire risks of installing comparative insulation products in buildings. The difference in performance is for you to witness – and to judge for yourselves. As you have seen, behind me there are five cubicle type compartment rigs with doors to show the materials used inside.

These represent insulation of a typical structure. Equal fire loads will be applied to each 'Room'. This will be done with a calibrated gas burner. You might consider this fire load to have arisen – say – following a wastepaper basket fire.”

102. Contrary to these representations, the demonstrations did not evaluate the Kingspan products in the situation of a real fire and did not illustrate some of the real risks of installing them in buildings, for all the reasons I have given.

103. The third demonstration, of the TR 26 roof board, described as a “foam based panel”, was accompanied by this commentary:

“See how quickly this product takes up the fire load, and starts to emit large volumes of smoke. If occupiers were trapped in this 'room' they would already be under extreme hazard from this smoke.

Imagine now, that a fire-fighter enters this room during rescue operations. The smoke has built up to an uncertain pressure and is now very hot.”

104. This represented the product was not safe and that occupiers of the room and fire fighters would be under extreme hazard. It was followed by the “induced flashover” caused by closing and then opening the door and then this commentary:

“All it needs is an injection of oxygen, such as a window component collapsing and he is met with backdraft and the deadly effect of 'flashover' occurs.

All the free carbon in that dense smoke has instantaneously combusted to create an explosive effect.

Remember - what we are watching is just a small demonstration 'Room' with only a limited quantity of insulant but, as Building Regulations require increased insulation thicknesses, this potential fire load will continue to increase.

This is just a demonstration which simulates conditions that could be experienced in real fire situations in everyday life, in everyday buildings.

These are the conditions which are not just a threat to occupants, but also to the fabric of the building and the building itself - possibly leading to a total loss.”

105. Here the narrator again represented the demonstration was illustrative of what might happen in a real fire and that the consequences could be deadly. This was wholly misleading because the panels would simply not be installed in this way.

106. The fourth demonstration of the KS1000 MR sandwich panel was described by the narrator in this way:

“After the first 1½ minutes we can already see some development as the source fire penetrates the panels, first through the jointing system, which has been installed following the manufacturer’s instructions, and seems to be a weak point.

We are now into the 4th minute of this fire and significant smoke development is coming from the door of the rig. One can imagine the conditions inside, for instance a hotel room, or a school corridor, in a real fire. Available escape times may have to be very short to prevent a tragedy occurring.”

107. Once again, the delegates were invited to consider this demonstration was illustrative of how the product might perform in a real fire and that it might result in a tragedy unless “escape times” were very short. This was quite unfair because, as Mr Cody accepted, the product had not been installed in accordance with the manufacturer’s instructions. Further, it would not have been installed on all four walls and the ceiling of a room.

108. Finally, the fifth demonstration of the K11 roof board was described as being “well alight” and that even the most “fire safe” category of foam insulation board (that is to say, phenolic) could not perform favourably with the Rockwool “non-combustible” products.

17 September, 2 and 17 October 2008

109. The demonstrations at the 17 September and 2 and 17 October 2008 road shows were all very similar and I need only refer to the transcript of the first of them.

110. The narrator began by explaining that the demonstration would provide a visual impression of the effects that may be observed when various insulation products are tested in the ISO 9705 test. After referring to the use of a number of marketing terms including “fire safe”, he continued that the demonstration rigs were not designed to replicate how the products would be constructed on site or the products’ fire performance in end use and they were designed to indicate the difference in behaviour between non-combustible and combustible insulation materials and composites when exposed to naked flame.

111. The narrator then turned to the five rigs and, despite his earlier observations, said this:

“As with the small flame demonstrations, the room corner rigs are designed to indicate the difference in behaviour between various insulation materials and composites when directly exposed to flame. This time, both the size of the flame and the quantity of insulation used, obviously, are greater. The room units will be lit in sequence so that we can concentrate on the performance of each material as the fire progresses. Now, we expect to see the evolution of products of combustion as we witness this you may be able to imagine the effect that smoke obscuration and debilitating gases could have on someone attempting to escape from a building, say, but also highlight the often ignored consequences of fire. Now I mean those associated with environmental pollution, pollution from the fire fighting run off water and the other related health hazards. These should really be considered together with other consequential costs such as those concerned with evacuation and transport, closures in affected areas and not least additional fires which may be caused by burning brands and sparks.”

112. He therefore invited the delegates to consider the impact of what they were about to see upon the ability of anyone to escape from a building in which such products were installed.

113. A little later and after describing the effect of the burner on the DuoRock roof board and Europanel sandwich panel he turned to the last three rigs. He said this about TR 26 roof board:

“Now, on number 3, room number 3 here, the one in the middle, we go for a further roofing application. This is the common PIR, or Polyisocyanurate roof insulation board faced with aluminium foil. The insulation material does not meet the non-combustible definition provided in UK building regulations, and again we just want to see how quickly this product reacts to the fire load and starts to emit large volumes of smoke, which will happen. So there we go, that's the PIR foam, there we go. This will happen very very quickly, keep your eye on this third heat sensor here at the bottom, 24 and rising, and that's on 14 seconds. 5:05 minutes, we'll knock 20 seconds off over there for the slightly late start, so but you can see the big differences in the times already. This thing's only been going for 28 seconds and it's up to 130 plus degrees, 150, look at this - it's rocketing.

Now this smoke could obviously pose an extreme hazard to building and the building occupants as well - look at that. I mean, I think you'd see that that's very very very graphic. Let me get out the way so you can all get a good view. And look at that, you can see the flashover has already occurred, it's a sudden increase in combustion which can be seen as fire

bursting out of the room. Look at that. The onset of flashover in a fire can significantly affect the life safety of anyone remaining in the room, well you just wouldn't want to be in that room, would you, the origin and if not checked by a fire resisting barrier may result in the fire spreading to other parts of the building. You can see how easily that could happen. Now that's properly alight and the temperature is up at, look at that, my goodness, it's nearly at 1000 degrees - 904, look at that. With a build up of hot, dense smoke an injection of oxygen such as a window component collapsing can also create a back draft. Now we're not going to demonstrate back draft to you this morning. The potentially explosive effect of a flashover can occur - an obvious concern to fire engineers, and for obvious reasons, fire fighters because for them that's a very dangerous thing to be going in and dealing with.

Remember, what we are watching is just a small demonstration with only a limited quantity of insulation but its thermoregulations require increased insulation thickness this potential fire load, that will continue to increase as time goes on. Look at that, 2 minutes 7 seconds, 1000 and 30 odd degrees. Down here we've got 290 degrees for the first one, the Rockwool Duo at 7 minutes 4. These conditions are not a threat to all because obviously the fabric buildings, its structure and contents possibly leading to total loss. Someone just to check back to rooms 1 and 2 again, just look at the times and of course there's the FIT boys going in now to deal with that. So while we douse down we'll just look at the times again 7 minutes 32, 5 minutes 35, 294 degrees, 270 and that finished up at 1030 degrees.

....

Now that just shows you how dangerous that flashover had become and the heat that was created within such a short time just in that small demonstration room, imagine a whole office block, it doesn't bear thinking about. OK the sensors have stopped and we have stopped the time at 3.39 on that one but of course the other two clocks are still running on room numbers 1 and 2.

114. The narrator here suggested that the product reacted very quickly to the fire load; that large amounts of smoke were emitted which would pose an extreme hazard to both the building and its occupants; that flashover would significantly affect the safety of anyone in the room; that, if not checked, the fire might spread to other parts of the building; that this demonstration involved only a limited amount of insulation but that the regulations might require a greater thickness of insulation with a higher potential fire load; and that the danger presented by a whole office block rather than a small demonstration room was so great it did not bear thinking about. These were representations, contrary to the fact, that the Kingspan product was dangerous.

115. The burner in the fourth rig was then ignited and the delegates heard this commentary about the KS1000 MR panel:

“So that's probably into about, coming up to a minute and a half and you can see there is some smoke developing now, coming out of the door of the rig and one can imagine the conditions inside you know something like a hotel room, school corridor and should a real fire lead to the development of such quantities of smoke then from whatever source or combination of combustible materials the available escape times may have to be very very short here. If you have get out from the school corridor or hotel you are going to have to get out very, very, very quickly as you will see in a minute as this captures. And again, 2 minutes keep you eye on the degrees C there, number 4 at the top 124, 126 climbing. We'll expect this to up to about 3 minutes you will start to see some significant differences, 145 degrees now and climbing. Inside that or inside a school corridor you would be properly choking by now and really looking for a way out, hugely dangerous.”

116. Contrary to the impression created by these comments, the rig did not represent the conditions that would result from the normal use of KS1000 MR panels in a school or hotel and did not provide any proper basis for delegates to imagine the consequence of using KS1000 MR panels when properly installed in such a structure. Once again, it gave the misleading impression that this was how KS1000 MR panels would perform in a real fire when properly installed and that delegates could draw conclusions as to the increased risk to occupants arising from the use of Kingspan rather than Rockwool panels.

117. The fifth demonstration of the K11 phenolic board went to flashover between two and four minutes after ignition.

118. Finally and shortly after the warning at the end of the demonstration to which I have referred at [99] above, Mr Schreuder said:

“I think it is important to highlight that this is one of the tests that products are being exposed to and this definitely gives the clear picture how different products can contribute to a fire.”

119. Against the background of the demonstration and its commentary, the attendees were being invited to draw conclusions about the relative fire risks posed by Rockwool and Kingspan products when properly installed and that the Kingspan products were dangerous.

120. It is no surprise to me that the transcript concludes with the following comments by two attendees:

“Unbelievable, 3 minutes is no time is it?”

“It's the smoke that kills a lot of the time isn't it?”

121. The attendees then retired for lunch where the Second Video was played in the background, again with the sound muted.
122. At the end of all of the 2008 road shows, except for the show in January, the attendees were provided with delegate packs containing a copy of the Second Video; Rockwool's flat roof brochure; a feedback questionnaire and a note from Mr Schreuder warning them of the responsibility imposed by the RRFSO on all persons involved in the design and construction of buildings to address potential fire risks. Summaries of the responses to those questionnaires show that the demonstrations had a considerable impact on attendees but otherwise shed little light on the matters I have to decide.
123. There is one further point on the road shows I should address at this stage. Rockwool contends that Kingspan knew of the contents of the road shows for many months before raising any serious complaint about them, suggesting that it had no real objection to them. I do not accept this was so. I am satisfied that Kingspan did not know of the 2007 road shows until May 2010, after the issue of proceedings. It did know of the January 2008 road show shortly after it took place but not the full details of what was said. Nevertheless it did know and was concerned that it involved inappropriate demonstrations in which insulation boards were installed in test rooms and directly exposed to flames. Then, in August 2008, it became aware that Rockwool intended to conduct further road shows in the autumn and so requested a script. This was refused and was not disclosed until July 2010.

Alleged misrepresentations in the road shows

124. In light of the foregoing, Kingspan invites me to conclude that in each of the road shows Rockwool made a series of misrepresentations. I will address them in turn and consider them from the perspective of persons who specify or influence the specification of building materials to be used in a project, such as quantity surveyors, architects, builders and insurers.

(i) That the tests performed evaluated the performance of Kingspan's products in the situation of a real fire and therefore illustrated real risks of installing Kingspan's products in buildings.

125. Rockwool disputes that this representation was ever made. It says that the tests were simply demonstrations and were explicitly described to be such and to be merely illustrative of the performance of the products when tested in accordance with ISO 9705. Further, it was made clear the tests were tests, that insulation products are normally faced and that what was being demonstrated was the ability of such products to contribute to the fire load when exposed to flames.
126. In support of this contention Rockwool relies upon an "Editor's comment" made by a Mr Davies of the journal Professional Builder Merchant in which he said that

"the manufacturer in question emphasised we were witnessing a demonstration and not a certified or official test, asserting the requirement to follow appropriate regulatory guidelines to avoid potentially severe consequences inappropriate and

inadequately specified or installed building materials can have in relation to fire safety”

127. It also relies upon the fact that the British Plastics Federation wrote to Rockwool, received a response, was invited to and attended a road show but took no further action.
128. I have taken careful account of all the matters on which Rockwool relies but I am unable to accept its submission. Of course, the tests were simply demonstrations and, in the case of the 2008 road shows, attendees were also told that the tests provided a visual impression of the effects that may be observed when these types of insulation products are tested under ISO 9705. But that does not mean to say Rockwool did not also represent that they illustrated the real risks of installing the products in buildings. In the case of the 2007 and January 2008 road shows, the representation was made expressly. In the case of the other 2008 road shows, and despite stating that the demonstration rigs were not designed to replicate how the products would be constructed on site or the products’ performance in end use, the narrator then proceeded to invite attendees to consider the impact of what they were seeing upon the ability of anyone to escape from a building in which they were installed and how dangerous such a building would be. Indeed the attendees were told by Mr Schreuder that the demonstrations gave a clear picture of how different products can contribute to a fire. For these reasons, as elaborated in my detailed consideration of the road shows earlier in this judgment, I conclude Rockwool did indeed make this representation. It is accepted by Rockwool that if the representation was made then it was false.
- (ii) That such tests were appropriate tests from which conclusions might properly be drawn as to relative dangers in a fire (including the risk faced by occupiers of a building in a fire) of Kingspan’s products and Rockwool’s products when properly installed and used for their intended purpose.*
129. Rockwool says that the tests were entirely appropriate ones from which to draw conclusions about the relative dangers in fire of the parties’ respective products and that it is perfectly proper to consider the performance of those products as placed on the market. Doing so enables designers and specifiers to perform the risk assessment that is required of them when considering the fire safety of buildings they create. They can take into account the performance of the materials and, if necessary, either not use them or protect them in a way such as to ensure they are unlikely to become exposed to flames. There can be nothing wrong in providing them with the information to allow them to do this.
130. I accept that it is perfectly proper to consider the performance of products as placed on the market. Indeed, this is the basis of the Euroclasses classification system. But the tests used could not provide any basis for evaluating or drawing conclusions as to the relative dangers in a fire of the products when properly installed and used for their intended purpose because TR 26 and K11 are designed and intended for use as external roof boards installed above a roof deck, not on the internal walls or ceiling of a room; and KS1000 MR is not designed or intended for use on the internal surface of the ceiling of a room.

131. The key question, therefore, is whether Rockwool made the representation at all. In assessing this question I have paid careful regard to the various caveats, warnings and qualifications expressed by those involved in presenting the road shows. Nevertheless and for the reasons I have elaborated in my analysis of each of the road shows, it is my opinion that Rockwool did indeed make this representation. I believe that attendees would have understood that they were witnessing tests designed to show them the real risks attached to the use of these products in a fire when properly installed and used as intended.

(iii) That the tests shown during the road shows provide a fair comparison from which conclusions may properly be drawn as to the relative dangers in a fire of Kingspan's products and Rockwool's products when properly installed and used for their intended purposes.

132. This alleged misrepresentation is closely allied to the immediately preceding allegation. Again, for the reasons I have elaborated in considering each of the road shows, I believe this representation was made and that it was false.

(iv) That the tests shown in the road shows showed the same or similar results as would be obtained when Kingspan's products were tested in accordance with ISO 9705.

133. I do not think there is much in this allegation. Rockwool disputes that it represented that the same results would be obtained when Kingspan's products were tested in accordance with ISO 9705. I agree. It represented that the demonstrations were illustrative of how the products would perform in ISO 9705 room tests. That representation was true, albeit that the Kingspan products went to flashover more quickly for the reasons I have explained at paragraph [79] above.

(v) That the tests showed Kingspan's products are dangerous when properly installed and used for their intended purpose.

134. This is a key allegation and is strongly disputed by Rockwool. It is a matter I have considered in detail in analysing each of the road shows and, for the reasons I have given, I believe Rockwool did indeed represent in each of the road shows that Kingspan's products, when installed, are not safe, present a real fire danger with significant associated fire fighting problems and have dramatic implications regarding escape times and structural damage. It is accepted by Rockwool that the representation, if made, was false.

2007 Video

135. There is no dispute that the 2007 Video was shown at the 2007 road shows with the sound muted. Its effect, as Mr Schreuder accepted, was to show the attendees further images of fire pouring from buildings and so increase their awareness of the contribution different products make to the spread of fire.

136. There is, however, a dispute as to whether copies of the 2007 Video were ever distributed. Mr Ralph attended the Wembley road show on 31 January 2008 and explained in his second witness statement that, as far as he was aware, the 2007 Video was not shown to attendees and they were not given a copy of it. This account was,

however, contradicted by an email from Lucy Bridle of IAS Smarts sent on 2 February 2008 to Mr Schreuder, Mr Ralph and others in which she referred to and enclosed a copy of a blog entry by a Mr Chapman, the editor of Building Talk, a construction on line portal covering news and views from across the building materials community, which stated:

“Despite the inclement weather, Howard was very impressed with what he saw at Wembley and is keen to follow this up in more detail over the course of the next couple of weeks. He was particularly keen to link the DVD footage to the site. 5 other journalists also called us yesterday to find out when they would be able to get hold of the DVD footage they saw in the press lounge on the plasma screens ”

137. It appears from this email that, contrary to Mr Ralph’s recollection, the 2007 Video was shown, as he accepted in cross examination. Interestingly, Mr Chapman also wrote about this road show:

“ Last week I was at fire demonstration organised by Rockwool and held at WembleyRockwool manufacture a range of non-combustible stone wool insulation materials and these were pitted against a variety of plastic and foam based insulation materials to compare their real fire performance.”

138. Moreover, an internal Rockwool document dated 4 February 2008 records events that happened immediately after the January road show:

“Follow-up press pack and DVD sent to 50 non-attending press”

139. Mr Ralph maintained that he knew nothing about this and that he was not aware of any DVDs being sent out. It was, however, a document produced by Rockwool on disclosure and I have no reason to suppose it is other than accurate. Moreover, it appears from Mr Ralph’s evidence that he did not have an accurate recollection of what happened at the road show itself. Accordingly I conclude that it is likely that copies of the 2007 Video were indeed sent out to members of the press.

140. That brings me to the 2007 Video itself and I will consider it from the perspective of persons who specify or influence the specification of building materials. It opens with images of a child sleeping, a kindergarten and a library and then graphic footage of a building on fire. The commentary explains that we spend most of our lives indoors, that buildings are of vital importance to our well being and yet every year thousands of people perish in fires. There follows a warning that unclear or misleading communications about the fire properties of building materials can have deadly consequences.

141. The narrator then offers the following introduction to the viewer:

“To show the real difference in fire behaviour between non-combustible stone wool and insulation based on polyisocyanurate or phenolic foam, we will put the different

materials to a large-scale fire test: the ISO 9705 room/corner test simulates a fire in a room and it was used as the large scale reference test when developing the Euroclass system.”

142. For reasons I have explained, I have no doubt that a significant proportion of viewers would not know the details of the ISO 9705 test or how it came to be used as the reference test for the Euroclasses system. But I believe they would naturally assume from what they were being told that it was a suitable test to use in order to demonstrate the real difference in fire behaviour between these various products in a simulation of a fire in a room or, to put it more simply, they would think they were about to be shown a demonstration of how these products would behave in a real fire.
143. The video then shows and the narrator describes the performance of the DuoRock roof board and the Europanel sandwich panel with the rock wool core. Neither results in flashover over the 20 minutes of the test.
144. The third product to be tested is identified by the narrator as Kingspan TR 26. The burner is ignited and the commentary continues:

“The gas burner in the room corner is turned on. After only 20 seconds a smoke layer starts to build up under the ceiling. The hot smoke becomes denser and starts to ignite. After just 40 seconds the first flames come out of the doorway. According to the manufacturer this product has achieved market leading levels of fire performance and is certified both by the Loss Prevention Certification Board and Factory Mutual. The fire intensifies and after just 1 minute and 30 seconds the entire room is engulfed in flames. The test is stopped and the fire extinguished.”

145. The implication is that the LPCB and FMA approvals are suspect and that if a room in which TR 26 has been properly used and installed is exposed to a fire, the room will rapidly be engulfed by flames, and that is so despite the fact the product has both LPCB and FMA approvals. But this is not something which the test establishes at all. When properly used, TR26 would be installed above a roof deck and in that application has indeed achieved market leading levels of fire performance. There is no reason to suppose its use would lead to a room being engulfed by flame in less than two minutes.
146. The narrator then explains that the fourth rig contains Kingspan KS1000 MR and the viewer is invited to consider whether a protective metal coating “will do the trick”. He continues that the panels were installed in much the same way as the Rockwool insulated sandwich panels but that the corners, wall and ceiling joints were covered by steel flashings and that panel to panel joints were fixed from the inside to give extra stability. The burner is ignited and after ten minutes he says:
- “After 10 minutes the gas burner is increased in intensity to 300 kilowatts. The smoke intensifies and in less than 30 seconds the heat prises the first joint in the ceiling open and flames emerge from the core of the panel. The smoke layer under the ceiling soon increases considerably. The entire ceiling is now involved

in the fire. After 11 minutes and 20 seconds the first flames come out of the doorway. The fire spreads rapidly. It is now very intense. In its product literature, Kingspan writes: “The Association of British Insurers (ABI) state that external claddings that are LPCB approved to LPS 1181 can be classed as ‘Non-Combustible Building’. These pictures don’t exactly add credibility to this claim. After 13 minutes the test is terminated.

Even after the test has been terminated flames are still emerging from joints between the panels.

The fire has severely damaged the sandwich panels. The fixing of the joints has prevented the panels from complete disintegration and collapse. Yet it should be noted that these joints were fixed at considerably closer distances than those recommended on the Kingspan Panel website. Hence the joints in this test were stronger than those used on a normal building site.”

147. The narrator plainly suggests the panels were fixed more securely than Kingspan recommends and that the test results challenge the credibility of the LPCB LPS 1181 approval the panel has obtained. But the panels were not fixed as Kingspan recommends for a number of reasons, most notably they were not secured to a metal frame; further, and most importantly, the LPS 1181 standard involved testing KS1000 MR as an external envelope wall panel as it is intended to be used and not as a roof or ceiling product.

148. The final rig was fitted with K11 phenolic roof board. This is how the narrator begins:

“Not all Kingspan products use polyisocyanurate insulation. Will we prevent flash-over if instead we test a different plastic? Kooltherm K11 consists of a 90 mm phenolic-foam core and is used as roof insulation. The top facing, which is intended to face upwards towards the roof covering, is a bonded bitumen-coated Perlite board. The lower - tissue based - facing will be exposed to the flames of the burner - as it would be to flames coming from inside a building.”

149. Here the narrator expressly states what he has earlier implied, that the test rig fairly reproduces how the product would be exposed to flame when properly installed in a building.

150. The burner is ignited and he continues:

“Soon after the start of this test the product in the corner behind the burner becomes discoloured. Under the ceiling the smoke layer starts to ignite.

After 2 minutes the smoke layer under the ceiling becomes less intense. No flame spread is observed on the product until

..., after 10 minutes, when the heat load is increased from 100 to 300 kilowatts – equal in strength to a burning armchair. The product ignites once again and thick smoke forms under the ceiling. Flames spread down the walls and 30 seconds after turning up the heat load the first flames come out the doorway. In its product literature Kingspan claims that: the “fire performance can be equivalent to mineral fibre”. In other words it should have the same qualities as the mineral fibre-board that we witnessed in our first trial. After 11 minutes the entire room is engulfed in flames and the test is terminated.”

151. So, in summary, the narrator represents that the use of K11 might lead to a room being engulfed by fire in about 11 minutes.
152. But, once again, the test provides no basis for this representation. When installed as intended above a roof deck and not on the inner surface of the walls or the ceiling, its lower surface would not be exposed to flames coming from inside a building and there is no reason to suppose its use would lead to a room being engulfed by flame.

The First Video

153. The First Video follows the same format as the 2007 Video and uses the same film of the SP tests. There are, however, significant changes to the commentary introducing the tests and its associated visual imagery, and to the commentary at the end of the video.
154. The video begins by posing the question on screen: “*Fire safe with certainty.... Or Fire safe with doubt?*” There follows a clear statement that: “*This is a large scale ISO 9705 room corner test conducted under laboratory conditions showing the fire behaviour of Rockwool, PIR and phenolic foam insulation*”. On pressing the play button, the viewer sees graphic footage of a real fire, images of various regulatory documents, footage of fire emerging from an ISO 9705 room and then further footage of another real fire. These are accompanied by an introduction which includes the following:

“New fire safety rules affecting most non-domestic buildings in England and Wales came into force on 1st October 2006 .The Regulatory Reform (Fire Safety) Order 2005 underlines the switch from fire protection to fire prevention and the foundation to this is a new emphasis on fire risk assessment.

The new Approved Document B of the Building Regulations also reflects this and for the first time designers are being asked to complete a fire risk assessment as the first stage of the design process, to identify fire risks at an early stage and try to remove them. An example would be to remove all combustible materials from areas of risk.

When specifying products references to fireproof, firesafe, self-extinguishing and fire retarding, for example, may be interpreted as the equivalent of “non-combustible”. Designers

have to be aware of the risk in specifying materials that are not actually non-combustible.

The accurate identification of combustible and non-combustible materials is one of the foundations of fire-risk assessment and the elimination of fire hazards.

To give an indication of the difference in fire behaviour between non-combustible mineral wool and insulation based on polyisocyanurate or phenolic plastic foam, we will put the different materials to a large-scale fire test.

As with all fire tests and fire test standards, the results of these tests must be used as just one part of a fire design and fire risk assessment. However there is a clear duty of care for designers to understand and advise upon the limitations of the fire performance of products as well as the limitations of all fire tests.

The test used was the ISO 9705 room/corner test that simulates a fire in a room in order to evaluate the contribution to fire growth made by construction products, including sandwich panels. It was chosen by the European Commission as its large-scale reference test to distinguish the Euroclass reaction to fire characteristics of construction products.

The Euroclassification system requires construction products, including flat roof insulation, to be tested ‘as placed on the market’. That is, directly exposed to the flame.”

155. This introduction emphasises the obligations on designers under the new regulatory regime to understand the fire performance of building products and materials. There is then some explanation of the ISO 9705 test which is said to simulate a fire in a room and so permit an evaluation of the contribution to fire growth made by construction panels including sandwich panels, and also to be the large scale reference test for the Euroclasses system which requires products to be tested as placed on the market.
156. The video continues with the footage of the SP tests just as in the 2007 Video but with a slightly simplified commentary and the removal of references to other certification systems. But, in relation to rig 5 containing K11, the narrator says this:

“Polyisocyanurate foam insulation is not the only type of plastic insulation used in the construction industry.

Phenolic foam plastic insulation may be thought by some to have a superior fire performance. The next test uses Kingspan Kooltherm K11 and consists of a 90 mm phenolic-foam core, which is used as roof insulation.

The top facing, which is intended to face upwards towards the roof covering, is a bonded bitumen-coated Perlite board. The

lower - tissue based - facing is exposed to the flames of the burner - as it would be to flames coming from inside a building.

Soon after the start of this test the corner behind the burner becomes discoloured. Under the ceiling the smoke layer starts to ignite.

After 2 minutes the smoke layer under the ceiling becomes less intense. No flame spread is observed on the product until 10 minutes after the start of the test, when the heat load is trebled.

The product ignites once again and thick smoke forms under the ceiling. Flames spread down the walls and only 30 seconds after turning up the heat load the first flames come out of the doorway.

After 11 minutes the entire room is engulfed in flames and the test is terminated.”

157. Here the viewer is expressly told, contrary to the fact, that the lower facing of the board is exposed to the flame, just as it would be in the case of a fire in a real building.

158. The video concludes:

“This video has shown how five different products react in the ISO 9705 test. As with all fire tests the results must be used as just one part of a fire design and fire risk assessment.

Although designers should always remember the limitations of all fire tests and not put too much reliance on one particular test or standard, the performance of commonly used products when exposed to fire should be a matter for careful consideration.

Common sense is always a good starting point - If all materials used in a building are non-combustible it is more likely that the final design solution will deliver low fire risk.”

159. The question I must now consider is what impression this video would make upon its viewers and I am again content to take for this purpose a reasonable person who specifies or influences the specification of building materials.

160. In addressing this question I think it is important to have a number of points in mind. The first is that the ISO 9705 standard is plainly designed and intended to test the reaction to fire characteristics of surface products. It simulates the effect of a fire in the corner of a small room with reasonable ventilation. In the standard configuration, the surface product to be tested is mounted on the walls and ceiling but other configurations may also be used if these reflect how the product to be tested is actually used in practice.

161. Further, the results of the ISO 9705 test, when performed on a product which is combustible, are very dramatic. Within a relatively short space of time the viewer sees

flames starting to spread on the product surface, a great deal of smoke and then, if flashover occurs, the whole room engulfed in flames which pour out of the door. This vivid imagery suggests extreme danger to any occupants and the building structure itself, a suggestion encapsulated by Rockwool's use of the term "9/11" in their internal documents.

162. It follows, in my view, that if the ISO 9705 test is carried out on a product which is not intended or designed to be used on an internal surface then it has an inherent capacity to create a very misleading impression as to the hazards and dangers which may be associated with its use. Moreover I consider the risk of viewers gaining such a misleading impression is increased by the fact that the ISO 9705 test is not well known or widely used.
163. Finally, Rockwool is a large and reputable company and I think that reasonable viewers of any Rockwool promotional video which purports to show the results of a standard test would naturally assume the test was both appropriate and carried out in accordance with the prescribed test method.
164. Against this background I come to the impression created by the First Video. At the outset viewers are invited to consider the question whether safety with certainty is preferable to safety with doubt. Images of a real building fire and flames emerging from a burning ISO 9705 room are then accompanied by a warning that designers have to be aware of the risks in specifying materials which are not non-combustible. This is followed by the statement that Rockwool has carried out a large scale fire test to give an indication of the difference in behaviour between non-combustible mineral wool on the one hand and PIR and phenolic plastic foam on the other. The test used, ISO 9705, is said to evaluate the contribution to fire growth made by construction materials. All of these statements, made as they were against the background images of fire and flame, suggest that viewers are about to gain an understanding of how, in a real fire situation, these various products will behave and contribute to fire growth, that the ISO 9705 test is a suitable test to use for this purpose, and that the results will assist them in meeting their obligations under the Building Regulations.
165. The footage of the SP tests which follows contains no explanation that the TR 26 and K11 products are not surface products, that they are roof panels intended and designed for installation above a roof deck and that, if installed in accordance with Kingspan's instructions, would never be used as surface products on the walls or ceiling of a room. Instead, the impression that I believe viewers would naturally gain is that they are seeing a realistic display of how these products would perform and contribute to fire growth in a real fire. This is reinforced by the statement that the K11 board has been installed with its lower facing exposed to the flame as it would be to flames coming from inside a building.
166. The commentary concludes by appealing to common sense. Viewers have by this time been warned of the emphasis on fire risk assessment and they have seen rooms in which Kingspan products have been installed engulfed by flames in only a few minutes. They are then told that although they cannot put too much reliance on the results of any one particular test or standard, the performance of commonly used products when exposed to fire is a matter to which they must give their careful consideration; that common sense is always a good starting point; and that if all the materials used are non-combustible it is more likely that the final design solution will

deliver low fire risk. I believe the clear message viewers are given is that they can use their common sense to deduce how the various products tested will behave in a real fire and the relative dangers arising from the use of each of them.

167. I have carefully considered the reference to the Euroclassification system, the statement that the European Commission has chosen the ISO 9705 test as its large scale test to distinguish the Euroclass reaction to fire characteristics of construction products and that the system requires construction products to be tested as placed on the market. But in my judgment these are wholly insufficient to dispel the impressions given by the whole of the video. Indeed they give the impression that the ISO 9705 test has been sanctioned by the European Commission for use in classifying products under the Euroclasses system when in fact the relevant tests for combustible products are the SBI and Small Flame tests.
168. I have also taken full account of Mr Jackman's evidence in cross examination. He was taken through a transcript of the commentary paragraph by paragraph and made no substantive criticism of any of them. This cross examination was, however, conducted on the basis of an assumption that there was no objection to carrying out an ISO 9705 test on these products as a matter of principle and that the tests were properly carried out in accordance with the ISO 9705 specification. Both of these were assumptions that Mr Jackman did not accept. Moreover, both sides submitted that I am in as good a position to assess the contents of the videos as any witness. In so doing, I must, of course, take into account not only the commentary but also the visual imagery in considering the overall impression they give.

The Second Video

169. There are two fundamental differences between the Second Video and the First Video. The Second Video makes no reference to any Kingspan trade marks and the SP tests on the K11 phenolic roof board have been removed.
170. The video has a modified menu page which reads:
- “The Rockwool fire test - This is a large-scale ISO 9705 room corner test conducted under laboratory conditions, showing the fire behaviour of Rockwool and PIR plastic foam insulation.”
171. The video itself opens with images of a blue flashing police light and footage of a burning building with a fireman hosing the fire from a ladder. After shots of various regulatory documents and associated imagery there is more footage of a burning building, a fireman hosing it from a ladder and billowing smoke.
172. This is accompanied by an opening commentary:
- “Fire is a complex phenomenon that can create serious dangers to life and property. As a result fire requires a designer to exercise a duty of care and to assess and advise upon all possible fire risks.

New fire safety rules affecting most non domestic buildings in England and Wales came into force on 1 October 2006. The

regulatory reform Fire Safety Order 2005 underlines the switch from fire protection to fire prevention and the foundation to this is a new emphasis on fire risk assessment.

The new approved Document B of the building regulations reflects this and for the first time designers are being asked to complete a fire risk assessment as the first stage of the design process to identify fire risks at an early stage and try to remove them. An example would be to remove all combustible materials from areas of risk. When specifying products, references to fire proof, fire safe, self extinguishing and fire retarding, for example may be interpreted as the equivalent of non-combustible.

Designers have to be aware of the risk in specifying materials that are not actually non-combustible. The accurate identification of combustible and non-combustible materials is one of the foundations of fire risk assessment and the elimination of fire hazards.

Non-combustible materials are defined by the Building Regulations applicable to all parts of the United Kingdom and the Republic of Ireland.

In accordance with these Regulations, the mineral wool insulation materials shown in this video are non-combustible.

The ISO 9705 room corner test does not determine whether a material is combustible but simulates a fire in a room in order to evaluate the contribution to fire growth made by construction products.

The following ISO 9705 fire tests have been undertaken to indicate the difference in behaviour between non-combustible and other insulation materials when subjected to this internationally recognised large-scale fire-growth test.

As with all fire tests and fire tests standards the results of these tests must be used as just one part of a fire design and fire risk assessment.

No direct inference should be drawn from these tests regarding the fire performance of finished, on-site constructions - on-site performance may be affected by factors not addressed by this type of individual 'product' or 'component' fire test. This test demonstrates the reaction of these materials when exposed to a naked flame."

173. The video continues with the four remaining tests and commentary, much as in the case of the First Video.

174. It then concludes:

“This video has shown how different products react in the ISO 9705 test. As with all fire tests the results must be used as just one part of a fire design and fire risk assessment.

We remind you that no direct inference should be drawn from these tests regarding the fire performance of finished, on-site constructions - on-site performance may be affected by factors not addressed by this type of individual ‘product’ or ‘component’ fire test. This test demonstrates the reaction of these materials when exposed to a naked flame.

However, the fire tests do indicate the difference in behaviour between non-combustible and other insulation materials when subjected to an internationally recognised large-scale fire-growth test.

Although designers should always remember the limitations of all fire tests - and not put too much reliance on one particular test or standard - the performance of commonly used products when exposed to fire should be a matter for careful consideration.

Common sense is always a good starting point. If all materials used in a building are non combustible, it is more likely that the final design solution will deliver a lower fire risk.”

175. As I have mentioned, the Second Video has been widely distributed by post; made available on Rockwool’s website; provided as part of the delegate pack following the 2008 road shows; and attached to the cover of an issue of the trade magazine “Roofing and Cladding Insulation”.
176. The first issue that arises in relation to this video is whether its viewers recognised the plastic foam products shown as being or at least including Kingspan products despite the removal of all references to the Kingspan trade marks and the deletion of the footage relating to the K11 phenolic roof board. I believe most viewers would have recognised Kingspan as being the likely source of these products for much the same reasons as I have given in relation to the 2008 road shows in paragraph [98] above. In short, Kingspan is the market leader in PIR roof boards and PIR core wall panels (in the case of the latter having some 80% of the market) and the whole purpose of the campaign was to target Kingspan as the evidence of Mr Bugge Garn and Mr Schreuder made clear. In any event, I have no doubt that viewers would at least have recognised Kingspan as a significant member of the class of traders selling such plastic foam products.
177. The second issue is the impression that the Second Video made on its viewers and once again I will consider for this purpose those who specify or influence the specification of building materials. I should say at the outset that significant amendments have been made to the commentary of the video, no doubt in an effort to ensure it is not objectionable. In particular, the introduction and conclusion have been

substantially re-worded and include the warning that the results must be used as just one part of a fire design and fire risk assessment and no direct inference should be drawn from the tests regarding the fire performance of finished on-site constructions.

178. Nevertheless, the video must be considered as a whole and seen in the light of the matters to which I referred in paragraphs [159]-[163] of this judgment in addressing the First Video. Considered in this context, the message conveyed by the Second Video is, in my judgment, very similar to that conveyed by the First Video.
179. At the outset viewers are warned of the obligations now imposed on designers and that in this connection it is important to be aware of the difference between combustible and non-combustible products. Reference is then made to ISO 9705 as being a test which simulates a fire in a room to evaluate the contribution to fire growth of the products being tested and further, that the ISO 9705 tests which they are about to see have the purpose of indicating the difference between combustible and non-combustible products in this regard. In my judgment viewers are here being invited to conclude that the ISO 9705 test is applicable to and an appropriate test to use on the products tested in the video and that the results of the tests will inform them as to whether they will be meeting or failing their obligations under the Building Regulations if they specify or use combustible products. This message is reinforced by the footage of a real fire and attempts to extinguish it.
180. Is this message dispelled by the disclaimer which is then delivered that “no direct inference” should be drawn as to the fire performance of finished on site constructions? I do not believe that it is. The disclaimer is qualified at best. Further, it does not explain that ISO 9705 is a test intended to evaluate the contribution to fire of surface products, not external roof boards.
181. The results of the tests on the four products are then shown and accompanied by much the same commentary as that used in the earlier videos save for the absence of any express reference to Kingspan. TR 26 (marked as product B) is the subject of the third test and the commentary relates that after 90 seconds the “entire room is engulfed in flames” giving the clear impression that this product will contribute to the growth of a real fire and is dangerous.
182. The same message is conveyed by the footage and commentary relating to the fourth test on KS1000 MR (marked as product E). Here the narrator explains that once the gas burner is turned up the smoke intensifies and in less than 30 seconds the heat “prizes the first joint in the ceiling open” and “flames emerge from the core of the panel”. A little later the narrator continues “the entire ceiling is now on fire”, that after 11 minutes and 20 seconds the first flames come out of the doorway and then explains the fire is spreading “rapidly” and becoming “very intense”. Once again the message conveyed to viewers is that this product will contribute to a real fire and is dangerous.
183. These images are extremely vivid and, as Mr Schreuder accepted in cross examination, were used because of the impact Rockwool thought they would make. In conclusion, and after another qualified disclaimer, viewers are reassured that the test is “internationally recognised” and so, by inference, appropriate and then invited to use their common sense in assessing the fire risk associated with combustible products.

184. The reaction of recipients to the video was much as Rockwool hoped. They recorded it was “well received” and that many people were “shocked at its content”. Rockwool submitted this shock simply reflected the correction of the false impression Kingspan has created by marketing its products as “fire-safe” and as having an excellent fire reaction performance. I am unable to accept that this is so. Kingspan has not marketed TR 26 as “fire-safe” and, more importantly, these products are not dangerous when installed as intended.
185. My conclusions as to the messages conveyed by the Second Video are reinforced by the way in which it was distributed. Many thousands of copies of the Second Video were sent out on DVD accompanied by a letter from Mr Schreuder in which he said:

“Are you aware of the fire risks that may be involved if non-combustible insulation is not specified in your building?”

Be sure to specify non-combustible insulation

There is no room for doubt where fire safety is concerned. Protecting a building and its users is critical. Approved Document B, the Regulatory Reform (Fire Safety) Order 2005 and LPC Design Guide demand a pro-active approach to managing risk. Failing to address all the issues could potentially leave you exposed to criminal prosecution or litigation.

Witness the difference between certainty and doubt

The enclosed DVD demonstrates the difference in fire performance of common insulation materials. You may be surprised to see how different products perform.”

186. Here again Rockwool emphasised to recipients the risk of specifying the use of combustible materials and implied that the DVD would inform the viewer as to what those risks were.
187. The issue of the trade magazine “Roofing and Cladding Insulation” to which copies of the DVD were attached contained a Rockwool advertising feature entitled “Fire Affects Everyone”. It concluded:

“Watch the DVD attached to the front cover of this issue to see a live demonstration of how different insulation products actually perform when subjected to fire in test conditions...”

188. It also included two claims which were found by the Advertising Standards Authority (“ASA”) to be misleading. The first, that:

“Plastic foam insulation products (commonly made from polyurethane, polyisocyanate, polystyrene or phenolic materials) are combustible and, in the event of fire, will contribute to its growth. These products cannot be classified as products of limited combustibility or as non-combustible”

was found to be misleading in the context of the advertisement as a whole because it gave the impression that plastic foam insulation materials installed in buildings in whatever manner would definitely contribute to the growth of a fire when that was not the case. The second, that:

“the RRFSO clearly states that designers may face criminal prosecution if they do not communicate all elements of the design that may affect fire performance, including the use of combustible products”

gave the misleading impression that plastic foam insulation products were so hazardous that they had to be reported in an RRFSO risk assessment when that was not the case.

Alleged misrepresentations in the videos

189. I must now again draw the threads of the claim together. Just as in the case of the road shows, Kingspan alleges that each of the videos contains a series of misrepresentations. I will address them in turn.

(i) That ISO 9705 specifies a test method which is intended to evaluate the contribution made to fire growth made by construction products such as Kingspan’s K11 and TR 26 shown in the videos.

190. This allegation has revealed a major difference between the parties. Kingspan says that ISO 9705 states in terms that it is only intended for surface products, and TR 26 and K11 roof boards are not surface products.

191. Rockwool says ISO 9705 is an international standard and a perfectly proper test to perform in order to demonstrate reaction to fire properties. Whether or not it is used for any regulatory or commercial purposes is irrelevant. Further, it was selected by the European Commission as the reference test to establish the classes of the Euroclassification system for the reaction to fire properties of construction products. Its selection for this purpose is an acknowledgement by the relevant regulator that it is an appropriate test for all construction products (except floor coverings). Rockwool is entitled both to subject its competitors’ products to the test and to demonstrate the relative performance of its own products in the same test. Comparisons of the properties of competitors’ products are to be encouraged and it is not open to a party to object to such comparisons simply because they are unfavourable to its products. Further, the nature of the test being carried out has been made clear and its role in the Euroclassification system has been explicitly explained.

192. In my judgment the scope of ISO 9705 is spelt out clearly in section 1, the relevant parts of which are recited in paragraph [29] of this judgment. The standard specifies a test method which is intended to evaluate the contribution to fire growth provided by surface products. These are defined as any part of a building that constitutes an exposed surface on the interior walls or ceiling. It follows that ISO 9705 is not therefore intended to evaluate the contribution to fire growth made by external roof boards such as K11 and TR 26. I accept that the ISO 9705 test method has been used to establish the classifications of the Euroclass system for all save a few construction

products and that it is the reference test for that system. But nothing done by the Commission has altered the scope of the ISO 9705 standard itself.

193. That said, there is nothing to stop any person carrying out the test method described in ISO 9705 in relation to a non-surface product as best he can. Indeed the European Commission has done exactly that for the purpose of developing the Euroclass system and the SBI test it prescribes for classifying combustible products. But the test method involves mounting the product on the inside of the test chamber which takes the form of a full scale (albeit small) room and directly exposing it to flame; it also requires the product to be mounted so far as possible in the same way as in actual use. So the test is plainly designed and intended to demonstrate the contribution to fire of surface products in a realistic scenario and, as has been seen, it can create a very dramatic effect. But if it is used in relation to non-surface products, particularly those which are combustible, it may produce a wholly misleading impression of their contribution to fire when properly installed as intended.

194. The question I must now consider is whether the videos represent that ISO 9705 specifies a test method which is intended to evaluate the contribution to fire growth made by construction products such as TR 26 and K11. In my judgment they do. For the reasons I have elaborated in considering the videos, they each suggest that ISO 9705 is intended for use in relation to all the products being tested. But this is simply not the case because TR 26 and K11 are not surface products.

(ii) That the tests on each of the Kingspan products shown in the videos were conducted in accordance with the method required by ISO 9705.

195. Rockwool accept that the representation was made. The issue between the parties is whether it was true.

196. So far as TR 26 and K11 are concerned, the answer is, I think, clear and follows from the scope of the standard. ISO 9705 specifies that the product to be tested must, so far as possible, be mounted in the same way as in practical use. Non-surface products cannot by their nature be mounted on the surface in the same way as they would be in practical use.

197. The position in relation to KS1000 MR is very different. This is a surface product and so falls within the scope of the standard. But Kingspan says it was not tested in accordance with the standard for the following reasons.

198. First, it says that all the internal surfaces of the room, including the ceiling, were covered by KS1000 MR. This, it continues, is not required by the standard and is not how the product would be installed because KS 1000 MR is never used on a ceiling.

199. In my judgment this point is misconceived. ISO 9705 recommends that this configuration be adopted in order to achieve comparable data between laboratories, and it designates it the standard configuration. So I do not accept that the installation of KS1000 MR on the ceiling was not in accordance with the methodology of the standard. But that is not to say the results of the test could not be presented in a misleading way so as to suggest, contrary to the fact, that they show how the product may behave in a real fire when installed as intended. This is a matter to which I must return.

200. Kingspan also says the panels were free standing and not supported by a steel frame. Further, the special KS1000 MR jointing arrangement which inhibits fire from gaining access to the core was not properly implemented.
201. Kingspan relies in this regard upon the evidence of Ms Messerschmidt who required SP to leave an air gap between the panels and the walls of the test room. The reason she made this decision was because, in use, the outside surfaces of the panels are exposed to the open air. In cross examination she frankly recognised this problem and acknowledged that, for this reason, she did not believe ISO 9705 was an appropriate test to use for such panels. She also accepted in cross examination that, in the case of sandwich panels, the mounting and fixing used can have a great influence on the test result. For his part, Dr Babrauskas mistakenly believed that the panels were secured to the walls of the test room by masonry materials and so gained support in that way. He accepted under cross examination that this was not so, but maintained that it would have had no effect on the product's performance.
202. Rockwool relies primarily on the evidence of Dr Johannson who explained that the panels were assembled free standing because it was not possible to fix them to a metal frame. He also explained how great care was taken in fixing them together and to make them as secure as possible. Flashings were used at the external and internal vertical corner joints and at the internal wall to ceiling joints. He continued that the normal procedure for freestanding sandwich panels mounted in the ISO 9705 test is not to use any external flashings because it is not possible to access the external surface of both the back and the side walls. Therefore, the external flashings were fixed to the external surface of the back wall before the side walls were mounted and the side walls were then pushed against the flashings but not fixed. He considered that all of this complied with ISO 9705 and its test methodology, and that the results he obtained were not surprising. None of this evidence was effectively challenged. Professor Sundström also confirmed that the tests were carried out in accordance with ISO 9705 and he was not challenged either.
203. This evidence must also be considered in light of the terms of the ISO 9705 standard itself. This requires products to be mounted in the same way as in practical use *as far as possible*. In my judgment the evidence, taken as a whole, establishes that this requirement was indeed met in relation to KS1000 MR, albeit the result was, by reason of the nature of the product, not perfect. I am also of the view that it is most unlikely that the criticisms advanced by Kingspan had any material effect on the ultimate outcome of the test. Dr Johannson confirmed that the results were much as he expected. He had tested this type of product before and knew how it behaved. Moreover, the results obtained were consistent with those derived from the ISO 13784-1 test which SP also carried out on KS1000 MR at about the same time. Mr Jackman sought to suggest that the results of that test may have been influenced by the use of a metal frame with an unduly small cross section. Dr Babrauskas disagreed. I did not find Mr Jackman's criticism persuasive and I do not accept that this deficiency, such as it was, had any material effect on the outcome of the test.
204. In conclusion, I find the representation was false in respect of the TR 26 and K11 roof boards but true in respect of the KS 1000 MR sandwich panel.

(iii) That tests carried out in accordance with ISO 9705 are appropriate tests from which conclusions may properly be drawn as to relative dangers in a fire of Kingspan's

products and Rockwool's products when properly installed and used for their intended purposes.

205. Rockwool says that ISO 9705 tests are appropriate ones from which to draw conclusions about the relative dangers in fire of the parties' respective products. It also says that it is entirely appropriate to consider the performance of products as placed on the market. Just as in the case of the road shows, it argues that doing so enables designers and specifiers to perform the risk assessment that is required of them when considering the fire safety of buildings they create. They can take into account the performance of the materials and, if necessary, either not use them or protect them in a way such as to ensure they are unlikely to become exposed to flames. There can be nothing wrong in providing them with the information to allow them to do this.
206. In my judgment this response does not quite meet the allegation. Kingspan contends that the videos represent that the ISO 9705 tests permit conclusions to be drawn as to the relative dangers of the parties' products when properly installed and used for their intended purposes. For the reasons I have given in considering each of the videos, I believe that their viewers would indeed gain that understanding. Accordingly, this representation is made in each of the videos and further, I believe that it is misleading. Tests in accordance with ISO 9705 are not an appropriate basis for drawing conclusions about how TR 26 and K11 roof panels will behave and their dangers in a real fire when properly installed. The position in relation to KS1000 MR is different. This is a surface product and I believe that appropriate tests conducted in accordance with ISO 9705 may allow conclusions to be drawn as to the consequences of using it for its intended purpose.

(iv) That tests shown in the videos provide a fair comparison from which conclusions may properly be drawn as to relative dangers in a fire of Kingspan's products and Rockwool's products when properly installed and used for their intended purposes.

207. Rockwool says the underlying basis for this complaint is that testing of products as placed on the market is illegitimate. Unless that is so, it continues, there is nothing wrong with what it has done.
208. In my judgment this allegation is much the same as the immediately preceding one, subject to one point. It relates specifically to the actual tests shown in the videos. I do not believe that the tests provide a fair comparison from which conclusions may properly be drawn as to the relative dangers in a fire of any of the Kingspan products when properly installed. The reason in the case of TR 26 and K11 is self evident; they are not surface products. The reason in the case of KS1000 MR is that it was installed on the ceiling of the test room as well as the walls and I think it is clear from the videos and the evidence that the presence of the product on the ceiling had a highly material effect on the way the product behaved.

(v) That tests in accordance with ISO 9705 and further or alternatively tests of the kind shown in the Rockwool videos are tests which are necessary to perform, or are tests which are reasonable to perform, for the purposes of ascertaining whether a non-domestic building incorporating Kingspan's products (installed and used as intended) complies with the Building Regulations.

209. Kingspan says this representation was made in each of the First and Second Videos but accepts it was not made in the 2007 Video. Rockwool disputes that this representation was ever made.
210. I have set out the extent to which the Building Regulations are referred to in the First and Second Videos. For the reasons I have given, I believe that they each invite viewers to conclude, contrary to the fact, that the ISO 9705 test method and the tests actually performed in the videos will inform them as to whether they are meeting or failing in their obligations under the regulations if they specify or use the Kingspan products. Further, I believe that the videos each give a misleading impression as to the contribution to fire that Kingspan's products will make when properly installed.
- (vi) That the tests showed that Kingspan's products are dangerous when properly installed and used for their intended purpose.*
211. For the reasons I have given, I believe this representation was made in respect of each of the Kingspan products shown in each of the videos, and it was not justified.

Trade mark infringement

212. The allegations of infringement of registered trade mark relate to:
- i) the 2007 road shows;
 - ii) the 2007 Video, in light of my finding that copies of it were distributed; and
 - iii) the First Video.
213. Kingspan owns the following registered trade marks ("the Trade Marks"):
- i) UK trade mark no. 1,363,740 and Community trade mark no. 661,496 each of which is for the word KINGSPAN; they are registered in respect of various goods including metal coated building materials and insulating materials.
 - ii) UK trade mark no. 2,261,615 and Community trade mark nos. 524,975 and 5,625,611 each of which is for the word KOOLTHERM; they too are registered in respect of various goods including metal coated building materials and insulating materials.
214. Kingspan also contends that by reason of their extensive use, each of the Trade Marks has a reputation in the UK and elsewhere in the European Community. This contention was supported by the evidence of Dr Rochefort and Mr Harris, none of which was challenged.
215. Directive 2008/95/EC ("the TM Directive") has replaced Directive 89/104/EEC. Article 5 reads:

Rights conferred by a trade mark

1. The registered trade mark shall confer on the proprietor exclusive rights therein. The proprietor shall be entitled to

prevent all third parties not having his consent from using in the course of trade:

(a) any sign which is identical with the trade mark in relation to goods or services which are identical with those for which the trade mark is registered;

(b) any sign where, because of its identity with, or similarity to, the trade mark and the identity or similarity of the goods or services covered by the trade mark and the sign, there exists a likelihood of confusion on the part of the public; the likelihood of confusion includes the likelihood of association between the sign and the trade mark.

2. Any Member State may also provide that the proprietor shall be entitled to prevent all third parties not having his consent from using in the course of trade any sign which is identical with, or similar to, the trade mark in relation to goods or services which are not similar to those for which the trade mark is registered, where the latter has a reputation in the Member State and where use of that sign without due cause takes unfair advantage of, or is detrimental to, the distinctive character or the repute of the trade mark.

3. The following, inter alia, may be prohibited under paragraphs 1 and 2;

(a) affixing the sign to the goods or to the packaging thereof;

(b) offering the goods, or putting them on the market or stocking them for these purposes under that sign, or offering or supplying services thereunder;

(c) importing or exporting the goods under the sign;

(d) using the sign on business papers and in advertising.

[...]

5. Paragraphs 1 to 4 shall not affect provisions in any Member State relating to the protection against the use of a sign other than for the purposes of distinguishing goods or services, where use of that sign without due cause takes unfair advantage of, or is detrimental to, the distinctive character or the repute of the trade mark.

216. Council Regulation 207/2009 (“the CTM Regulation”) has replaced Regulation 40/94. Article 9 reads:

Rights conferred by a Community trade mark

1. A Community trade mark shall confer on the proprietor exclusive rights therein. The proprietor shall be entitled to prevent all third parties not having his consent from using in the course of trade.

(a) any sign which is identical with the Community trade mark in relation to goods or services which are identical with those for which the Community trade mark is registered;

(b) any sign where, because of its identity with, or similarity to, the Community trade mark and the identity or similarity of the goods or services covered by the Community trade mark and the sign, there exists a likelihood of confusion on the part of the public; the likelihood of confusion includes the likelihood of association between the sign and the trade mark;

(c) any sign which is identical with, or similar to, the Community trade mark in relation to goods or services which are not similar to those for which the Community trade mark is registered, where the latter has a reputation in the Community and where use of that sign without the cause takes unfair advantage of, or is detrimental to, the distinctive character or the repute of the Community trade mark.

2. The following, inter alia, may be prohibited under paragraph 1:

(a) affixing the sign to the goods or to the packaging thereof;

(b) offering the goods, putting them on the market or stocking them for these purposes under that sign, or offering or supplying services thereunder;

(c) importing or exporting the goods under that sign;

(d) using the sign on business papers and in advertising.

[...]

217. Article 5 of the TM Directive has been implemented in the UK by section 10 of the Trade Marks Act 1994, but it is convenient to refer to the provisions of the TM Directive. Infringement is alleged under Article 5(1)(a) and (2) of the TM Directive and Article 9(1)(a) and (c) of the CTM Regulation.
218. Article 5(2) of the TM Directive and Article 9(1)(c) of the CTM Regulation establish, for the benefit of marks with a reputation, a wider form of protection than that laid down in Article 5(1) of the TM Directive or Article 9(1)(b) of the CTM Regulation. The condition of that protection consists of a use without due cause of a sign identical with or similar to a registered mark which takes or would take unfair advantage of or

is or would be detrimental to the character or the repute of the earlier mark. It is now well established that, despite the wording of each of these provisions, this wider form of protection applies also to goods and services identical with or similar to those in respect of which the mark is registered.

219. It is for the proprietor of the earlier mark to adduce proof that the use of the later mark would take unfair advantage of, or be detrimental to, the distinctive character or repute of the earlier trade mark. It is not necessary to demonstrate actual and present injury; it is enough that the proprietor of the earlier trade mark demonstrates that there is a serious risk that such injury will occur in the future. It is then for the proprietor of the later mark to establish that there is due cause for the use of that mark: Case C-252/07 *Intel Corp Inc v CPM United Kingdom Limited* [2008] ECR I-1000; [2009] RPC 15.
220. Rockwool submits, and I agree, that whichever Article is relied upon, the minimum conditions for liability are that the use in question:
- i) should involve the presentation of a sign identical or similar to the protected trade mark;
 - ii) should take place in the course of trade in the territory for which the trade mark is protected by registration;
 - iii) should take place in relation to goods or services capable of being regarded as infringing goods or services;
 - iv) should be such as to affect or be liable to affect one of the functions for which protection can be claimed in the exercise of the rights reserved exclusively to the proprietor of the registered trade mark; and
 - v) should be committed by a third party acting without the consent of the proprietor of the registered trade mark.
221. Rockwool accepts that the provision of the 2007 Video and the First Video to members of the relevant public would - and the 2007 road shows did - satisfy the conditions identified in i), ii), iii) and v) above. But it says the activities complained of did or, if performed, would constitute legitimate comparative advertisements and so cannot be such as to affect or be liable to affect one of the functions of a trade mark for which protection can be claimed and so do not satisfy the condition identified in iv). It is to that issue I now turn.

Comparative advertisements

222. The law relating to comparative advertising has been harmonised by a series of legislative measures, namely Directive 84/450/EEC of 10 September 1984; Directive 97/55/EC of 6 October 1997 and Directive 2005/29/EC of 11 May 2005. All of this legislation has now been codified in Directive 2006/114/EC of 12 December 2006 concerning misleading and comparative advertising (“the MCA Directive”).
223. It is clear that the MCA Directive contains an exhaustive harmonisation of the conditions under which comparative advertising in Member States is permitted and

such harmonisation implies by its nature that the lawfulness of comparative advertising throughout the European Union is to be assessed solely in the light of the European Union legislature: Case C-159/09 *Lidl SNC v Vierzon Distribution SA*.

224. Recitals (6) and (8) to the MCA Directive make clear the importance of comparative advertising:

(6) The completion of the internal market means a wide range of choice. Given that consumers and traders can and must make the best possible use of the internal market, and that advertising is a very important means of creating genuine outlets for all goods and services throughout the Community, the basic provisions governing the form and content of comparative advertising should be uniform and the conditions of the use of comparative advertising in the Member States should be harmonised. If these conditions are met, this will help demonstrate objectively the merits of the various comparable products. Comparative advertising can also stimulate competition between suppliers of goods and services to the consumer's advantage.

...

(8) Comparative advertising, when it compares material, relevant, verifiable and representative features and is not misleading, may be a legitimate means of informing consumers of their advantage. It is desirable to provide a broad concept of comparative advertising to cover all modes of comparative advertising.

225. Recitals 14 and 15 explain that to make comparative advertising effective, the use of a competitor's trade mark may be indispensable and that such use is permissible if it complies with the conditions laid down by the MCA Directive:

(14) It may, however, be indispensable, in order to make comparative advertising effective, to identify the goods or services of a competitor, making reference to a trade mark or trade name of which the latter is the proprietor.

(15) Such use of another's trade mark, trade name or other distinguishing marks does not breach this exclusive right in cases where it complies with the conditions laid down by this Directive, the intended target being solely to distinguish between them and thus to highlight differences objectively.

226. The relevant operative provisions of the MCA Directive are these:

Article 1

The purpose of this Directive is to protect traders against misleading advertising and the unfair consequences thereof and

to lay down the conditions under which comparative advertising is permitted.

Article 2

For the purposes of this Directive:

(a) "advertising" means the making of a representation in any form in connection with a trade, business, craft or profession in order to promote the supply of goods or services, including immovable property, rights and obligations;

(b) "misleading advertising" means any advertising which in any way, including its presentation, deceives or is likely to deceive the persons to whom it is addressed or whom it reaches and which, by reason of its deceptive nature, is likely to affect their economic behaviour or which, for those reasons, injures or is likely to injure a competitor;

(c) "comparative advertising" means any advertising which explicitly or by implication identifies a competitor or goods or services offered by a competitor;

....

Article 3

In determining whether advertising is misleading, account shall be taken of all its features, and in particular of any information it contains concerning:

(a) the characteristics of goods or services, such as their availability, nature, execution, composition, method and date of manufacture or provision, fitness for purpose, uses, quantity, specification, geographical or commercial origin or the results to be expected from their use, or the results and material features of tests or checks carried out on the goods or services;

(b) the price or the manner in which the price is calculated, and the conditions on which the goods are supplied or the services provided;

(c) the nature, attributes and rights of the advertiser, such as his identity and assets, his qualifications and ownership of industrial, commercial or intellectual property rights or his awards and distinctions.

Article 4

Comparative advertising shall, as far as the comparison is concerned, be permitted when the following conditions are met:

(a) it is not misleading within the meaning of Articles 2(b), 3 and 8(1) of this Directive or Articles 6 and 7 of Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market ("Unfair Commercial Practices Directive");

(b) it compares goods or services meeting the same needs or intended for the same purpose;

(c) it objectively compares one or more material, relevant, verifiable and representative features of those goods and services, which may include price;

(d) it does not discredit or denigrate the trade marks, trade names, other distinguishing marks, goods, services, activities or circumstances of a competitor;

(e) for products with designation of origin, it relates in each case to products with the same designation;

(f) it does not take unfair advantage of the reputation of a trade mark, trade name or other distinguishing marks of a competitor or of the designation of origin of competing products;

(g) it does not present goods or services as imitations or replicas of goods or services bearing a protected trade mark or trade name;

(h) it does not create confusion among traders, between the advertiser and a competitor or between the advertiser's trade marks, trade names, other distinguishing marks, goods or services and those of a competitor.

227. The case law of the Court of Justice establishes the following propositions relevant to this claim.

228. First, the purpose of the various conditions set out in Article 4 (previously Article 3(a)(1) of Directive 84/450) is to achieve a balance between the different interests that may be affected by comparative advertising. The aim is to stimulate competition between suppliers of goods and services to the consumer's advantage, by allowing competitors to highlight objectively the merits of comparable products while, at the same time, prohibiting practices which may distort competition, be detrimental to competitors and have an adverse effect on consumer choice: *Lidl SNC* at [20]; Case C-487/07 *L'Oréal SA v Bellure NV* [2009] ECR I-5185 at [68].

229. Second, the conditions listed in Article 4 must be interpreted in the sense most favourable to permitting advertisements which objectively compare the characteristics of goods or services, while ensuring at the same time that comparative advertising is not used anti-competitively and unfairly or in a manner which affects the interests of consumers: *Lidl SNC* at [21]; *L'Oréal* at [69].

230. Third, the lawfulness of comparative advertising is to be assessed solely by reference to the criteria laid down in the European legislature: *Lidl SNC* at [22].
231. Fourth, Article 4 lists cumulative conditions which the use of a competitor's trade mark in comparative advertising must satisfy in order to be permitted: *L'Oréal* at [54], [63], [65], [67], [70], [72], and [80]. (See also the decision of the Court of Appeal in *L'Oréal* [2010] EWCA Civ 535, [2010] RPC 23 at [44]).
232. Fifth, it is for the national court to ascertain in the circumstances of each case, and bearing in mind the consumers to which the advertising is addressed, whether the latter may be misleading. That court must take into account the perception of the average consumer of the products or services being advertised who is reasonably well informed and reasonably observant and circumspect: *Lidl SNC* at [46]-[47].

Conclusions on infringement

233. For the reasons I have given in considering the 2007 Video, the First Video and the 2007 road shows, when considered through the eyes of persons who specify or influence the specification of the building materials to be used in a project, they are each misleading and fail objectively to compare one or more material, relevant, verifiable and representative features of Rockwool's and Kingspan's products.
234. Moreover, the 2007 Video was distributed and the 2007 road shows were held with the intention of showing the difference between combustible and incombustible products, marketing Rockwool's products effectively and convincing those in the relevant market areas of the dangers associated with the use of Kingspan's products and that Rockwool products should be purchased because Kingspan's products result in uncontrollable fires and flashover in a room situation. Such is evident from all the matters to which I have referred in considering these various promotional activities, including the shock which the Second Video has caused and Rockwool's aim of encouraging analysts to challenge Kingspan on the potential risks for its business from the marketing of combustible products.
235. In my judgment it follows that the 2007 Video and the 2007 road shows have, without due cause, taken unfair advantage of and caused detriment to the repute of the Kingspan and Kooltherm marks and have discredited and denigrated Kingspan's products. Further, any repetition of these activities or distribution of the First Video in the future will cause further such damage.
236. I therefore find infringement under Article 5(1)(a) and (2) of the TM Directive and Article 9(1)(a) and (c) of the CTM Regulation.

Malicious falsehood

237. The allegation of malicious falsehood is made in respect of the Second Video and the threatened publication of the First Video.
238. The essentials of the tort are that the defendant has published about the claimant words which are false, that they were published maliciously, and that special damage has followed as the direct and natural result of their publication. As to special damage, the effect of section 3(1) of the Defamation Act 1952 is that it is sufficient if the

words published are calculated to cause pecuniary damage to the claimant: *Kaye v Robertson* [1991] FSR 62 at 67 (CA).

239. For the reasons I have elaborated, I am satisfied that the First and Second Videos contain false representations and they would be understood to refer to Kingspan, its products and business and their provision is calculated to cause Kingspan pecuniary damage.
240. The allegation therefore turns on the issue of malice. Malice will be inferred if it is proved that the words were calculated to cause damage and that the defendant knew when he published the words that they were false or was reckless as to whether they were false or not. There can be no liability for statements that are published in good faith.
241. Kingspan says that Rockwool must have known, or ought to have known:
- i) ISO 9705 specifies tests to be applied to surface products and that TR26 and K11 are not surface products within its meaning; accordingly the tests shown in the First and Second Videos cannot be in accordance with ISO 9705.
 - ii) KS1000 MR is not intended to be installed in the manner in which it was installed for the purposes of the tests shown in the First and Second Videos. Accordingly the tests shown produce a false impression of the characteristics of the product.
 - iii) The tests shown in the First and Second Video produce a fire scenario which is substantially more severe than one which is representative of the exposure to fire which the Kingspan products might reasonably be expected to encounter when installed and used in their intended manner. For example, a room would never be internally lined with TR26 and K11.
 - iv) The medium and large scale fire tests generally used for approval of products such as TR26, K11 and KS1000 MR do not include ISO 9705.
 - v) The fact that the complaint to the ASA was upheld, but Rockwool continued to distribute the Second Video.
242. Kingspan also relies on the evidence given by Mr Schreuder that it would be wrong to suggest that Kingspan's products were unsafe and that Ms Messerschmidt accepted that it would be wrong to suggest that the ISO 9705 tests showed how TR 26 and K11 would react to fire when installed in a real building.
243. I have addressed the substance of many of these points in considering the alleged misrepresentations made by Rockwool. I have found that the First and Second Videos are misleading in a number of respects. I have also made findings as to Rockwool's intentions in devising and pursuing this promotional campaign and that those intentions included promoting the sales of its own products at Kingspan's expense. But in my judgment none of these matters is sufficient to establish malice. I have not been persuaded that Rockwool ever believed the First or Second videos to be misleading; nor have I been persuaded Rockwool has ever been indifferent as to whether they were misleading. To the contrary, the videos were produced in close

association with SP, a highly reputable institute. Rockwool took steps to provide Kingspan with a copy of the First Video in advance of its distribution and notified Kingspan of its intention to distribute the Second Video, which embodied substantial modifications. It is of course true that the ASA upheld two aspects of Kingspan's complaint in respect of the trade magazine to which it was attached. But these related to the advertising feature rather than the video; so it is not true to say that Rockwool continued to distribute the Second Video contrary to the ASA ruling.

244. Overall I do not accept that Rockwool has acted from any improper motive in taking the steps that it has in relation to the First and Second Videos. In my judgment Rockwool has acted throughout in good faith.
245. It follows that the claim for malicious falsehood in respect of the activities of Rockwool thus far must fail.

Declarations sought by Kingspan

246. Kingspan seek declarations which mirror the alleged misrepresentations I have addressed at [124]-[134] and [189]-[211] of this judgment. These, and the declarations sought by Rockwool are, as both sides agreed, declarations of fact, and neither has any objection to this court making such declarations as a matter of principle. Indeed it is accepted they will resolve an issue of real substance between the parties.

Declarations sought by Rockwool

247. Rockwool seeks declarations:
- i) that the ISO 9705 fire test is an appropriate test to apply to and compare Rockwool's DuoRock roof board and Eurobond's Europanel with Kingspan's TR26, and Kooltherm K11 roof boards and KS1000 MR panel; and
 - ii) that the fire tests depicted in the First Video were carried out in accordance with the requirements and scope of ISO 9705.
248. The problem with the first declaration is that ISO 9705 is not intended to evaluate the contribution to fire growth made by non-surface products such as TR 26 and K11. Moreover, the test is not an appropriate test to evaluate the contribution of such non-surface products to fire when installed as intended in a building.
249. I believe the second declaration suffers from much the same difficulty. The fire tests on TR 26 and K11 were not carried out in accordance with the method of ISO 9705.

Conclusions

250. I conclude:
- i) The claim for infringement of the registered trade marks Kingspan and Kooltherm succeeds in respect of the 2007 road shows and the 2007 Video. The distribution of the First Video would also constitute an infringement.

ii) The claim for malicious falsehood in respect of the activities of Rockwool hitherto fails.

251. I will hear argument as to the precise form of order including any declarations I should make in the light of this judgment.