



Introduction:

In order to achieve compliance with The Building Regulations, a uniform approach to thatched buildings is now advocated where compensatory measures are considered acceptable.

The Dorset Technical Committee, in conjunction with the Dorset Fire & Rescue Service and The National Society of Master Thatchers, after consultation with the National Inspection Council for Electrical Contracting and the Building Research Establishment Ltd, jointly produced the ‘**Dorset Model**’ with the Local Authorities across Dorset. This has recently been revised and updated for 2009.

It should also be pointed out that whilst the Dorset Model is rooted in the heritage of the rural thatch of Dorset, it is in fact now recommended by local authorities for new build of thatch properties, right across the UK.

It is the guidance of Approved Document B of The Building Regulations, to install a 30 minute fire barrier when the roof is less than 12m from a boundary.

On the basis that evidence has shown that thatch can be made sacrificial in the event of a fire - the requirement is for roof rafters to be overdrawn with a minimum 30 minute fire barrier. This barrier should also be water resisting.

The Dorset Fire and Rescue Service go further, and recommend that a 60 minute fire barrier is installed under the thatch for property protection.

The use of a flexible material or cavity foam as a fire resisting barrier is not considered acceptable for the purposes of the Dorset Model.

Thatched Buildings - New Properties and Extensions:

New build specifications are often based on 150mm x 50mm rafters at 400mm centres, but this may vary. 50mm x 25mm timber battens are recommended on a micro porous boarding, to allow the thatch to breathe. Some Local Authorities may also require a breathable membrane to be installed between boarding and the battens. (Refer to local Building Control Office for guidance).

Promat recommend SUPALUX® THATCH for this application. Promat SUPALUX® THATCH is a non-combustible, micro porous, calcium silicate board (size 1.22m x 1.20m), that is resistant to the effects of moisture, and will not physically deteriorate when used in damp or humid conditions making it eminently suitable to this application, (Promat SUPALUX® THATCH is equally suitable for the re-roofing of existing thatched properties).

- continued overleaf

AUTHORITY: Promat Recommendation – Based on in-house knowledge and Ad-hoc test data

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The use of Promat PROMASEAL® Intumescent Acrylic Sealant to all board edges



Promat SUPALUX® THATCH with the fair face exposed to the building interior



Promat SUPALUX® THATCH used in a complex roof form design



Promat SUPALUX® THATCH creating complete roofing envelope

Roof Construction:

- For 30 minute fire protection, 9mm SUPALUX® THATCH (2) is fastened over the rafters using M4 x 38mm corrosion resistant woodscrews (3), at nominal 200mm centres.
- For 60 minute fire protection, 12mm SUPALUX® THATCH (2) is fastened over the rafters using M4 x 50mm corrosion resistant woodscrews (3), at nominal 200mm centres.

Nail gun fixings (ring shank nails), may also be used. Note: If fixings are into oak frames, stainless fixings **must** be used, as galvanised fixings react with the oak.

The Dorset Model also now requires the use of an intumescent mastic, to help seal the fire barrier along all junctions. PROMASEAL® Intumescent Acrylic Sealant should therefore be used at all board edges.

The 50mm x 25mm timber battens (4) are fastened through the SUPALUX® THATCH into the rafters (1). The thatch (5) should be fastened to the battens using wire and screw stainless fixings. The traditional crook fixing method is not recommended for use with the SUPALUX® THATCH protection system.

Counter battens are also not recommended, as they can create a flue effect that can permit fire to travel below the thatch.

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Other Considerations:

The Dorset Model also indicates a number of other requirements affecting new builds, (to be addressed by others), including:

- The chimney, including the pot, should terminate at least 1.8m above the height of the roof ridge. The chimney pots should also be limited to a maximum of 600mm in height to guard against condensation from hot flue gasses as they cool.
- A domestic mains and battery powered, interlinked smoke alarm system should be used, with a smoke alarm fitted in the roof void. The system should generally be in accordance with that specified in Approved Document B, to BS 5839: Part 6: 2004
- For new build, a terrace may not consist of more than three thatched dwellings together.

Also covered in the Dorset Model are a number of recommendations that should be carefully considered at an early stage of design, including U-value considerations. Thermal properties of thatched roofing materials are available and it is indicated that additional insulation may be required to achieve current U-values.

(Note: Promat recommends that only non-combustible insulation materials - such as rock wool, are used for this purpose).

Further details on the Dorset Model may be obtained from the Dorset Technical Committee website at:

<http://www.dorset-technical-committee.org.uk/>

Fire protection is the last line of defence against property loss, fire prevention therefore forms the front line. The majority of thatch fires are caused by chimney related problems, when used with multi fuel or wood burning stoves.

The National Society of Master Thatchers has conducted extensive research into the causes of thatch fires and have produced a number of useful guides including 'Fire in Thatch' - copies of which may be obtained from The National Society of Master Thatchers website at:

<http://www.nsmtltd.co.uk/publications.htm>

- or from the NSMT Secretary:

Secretary NSMT,

3 Parkers Hill,

Tetsworth,

Thame,

Oxfordshire,

OX9 7AQ,

e-mail: marjoriesanders@btinternet.com

Additional guidance on chimneys in thatch properties is also available from HETAS

HETAS Limited,
Orchard Business Centre,
Stoke Orchard, Cheltenham,
Gloucestershire,
GL52 7RZ.

The HETAS website is at: <http://www.hetas.co.uk>

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