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Thermazone® Torch-On Insulation

Thermal Insulation

Description

Facings: Thermazone® Torch-On Insulation is faced on the underside with a mineralised glass tissue auto-adhesively bonded to the insulation core during manufacture. The top surface is finished with a bitumen-coated glass tissue finished with a thermofusible polypropylene fleece.

Core: Thermazone® Torch-On Insulation is manufactured from a high-performance CFC/HCFC-free polyisocyanurate (PIR) based formulation with a typical density of 32 kg/m³. Thermazone® Torch-On Insulation is manufactured without the use of CFCs/HCFCs and has zero Ozone Depletion Potential (ODP) and a low Global Warming Potential (GWP).

Standard

Thermazone® Insulation has been independently site and laboratory tested by the British Board of Agrément, and awarded BBA certificate number 15/5253.



Uses

Thermazone® Torch-On Insulation is suitable for use with Icopal Profiles and Total Torch waterproofing systems, and other traditional partial bond torch-on systems. It is suitable for use over all types of structural deck and must always be laid over a vapour control layer.

For detailed waterproofing specifications please contact Icopal's Technical Department.

Roof Falls

The fall on a flat roof should be smooth and steep enough to prevent the formation of rainwater ponds. To ensure adequate drainage, 'BS 6229: 2003 (Flat roofs with continuously supported coverings. Code of practice)' recommends uniform gradients of not less than 1 in 80. The fall on a flat roof constructed using Thermazone Torch-On Board is normally provided by the supporting structure being directed towards the rainwater outlets. It should be noted that where bi-directional falls intersect, the resulting fall along the line of the mitre is less than that of the main area, and may produce ponding water. To account for inaccuracies and any deflection in the deck, the falls assumed for design should, therefore, be steeper than the recommended finished falls. These can be provided by utilising a Thermazone 'Xtra-Fall' Tapered Roofing System.

Properties

Compressive Strength: Typically, the compressive strength of Thermazone® PIR insulation exceeds 150 kPa at 10% compression and 125 kPa at 5 % when tested to 'BS EN 826:1996 Thermal Insulating Products for Building applications. Determination of Compressive Behaviour'.

Water Vapour Resistance: Modified to include board facings, the board achieves a resistance greater than 15 MN·s/g when tested in accordance with 'BS 4370-2:1993 (Methods of test for rigid cellular materials. Methods 7 to 9)'. Thermazone Torch-on Board must be laid over a vapour control layer.

Durability: When correctly applied Thermazone® insulation has an indefinite life. Its durability depends on the supporting structure and the conditions of its use.

Resistance to Solvents, Mould & Vermin: The insulation core is resistant to short term contact with petrol and with most dilute acids, alkalis and mineral oils. However, it is recommended that any spills be cleaned off fully before the boards are installed. Ensure that safe methods of cleaning are used, as recommended by the suppliers of the spilt liquid.

The insulation core is not resistant to some solvents, e.g. ketonic solvents; such as methylethylketone (MEK). Adhesives containing such solvents should not be used in association with this product. Damaged boards, or boards that have been in contact with harsh solvents or acids should not be used.

The insulation core and facings used in the manufacture of Thermazone insulation resist attack by mould and microbial growth, and do not provide any food value to vermin.

Thermal Properties: The λ -values and R-values quoted are in accordance with the Harmonised European Standard 'BS EN 13165: 2001 (Thermal insulation products for buildings – Factory made rigid polyurethane foam (PUR) products – Specification)' using so called 90 / 90 principles. Comparison with alternative products may not be appropriate unless the same procedures have been followed.

Thermal Conductivity: The boards achieve a thermal conductivity (λ -value) of

0.026 W/m.K (insulant thickness < 80 mm);
0.025 W/m.K (insulant thickness 80–119 mm); and
0.024 W/m.K (insulant thickness > 120mm).

Thermal Resistance: Thermal resistance (R-value) varies with thickness and is calculated by dividing the thickness of the board (expressed in metres) by its thermal conductivity value.



EN 13165

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Wind Loadings

Wind loadings should be assessed in accordance with 'BS EN 1991-1-4: 2005 (National Annex to Eurocode 1. Actions on Structures. General Actions. Wind Actions).

Attachment

When used with the Profiles/Total Torch systems the insulation boards are bonded by torch application which involves heating the stripes on the upper surface of the vapour control layer to disperse the thermofusible film and activate the bitumen stripes. The boards are positioned onto the vapour control layer and pressed into the surface ensuring a good and uniform bond. Boards must be close butted and laid staggered (broken joints).

Thermazone® Torch-On Insulation may be attached to other suitable vapour control layers using either hot bitumen, polyurethane insulation adhesive, or by mechanically fastening. When Thermazone Torch-On Insulation is used over metal decks attention must be paid to the requirement of the insulation board to comply with the minimum thicknesses shown in the table below.

Trough Width (mm)	Minimum Board Thickness (mm)
≤ 75	25
76-100	30
101-125	35
126-150	40
151-175	45
176-200	50

Storage

Insulation boards are supplied in shrink wrapped polythene which will only provide limited protection during unloading and handling. All board packs are clearly marked with date/time of manufacture, board type and thickness for ease of identification. Ideally, boards should be stored inside a building or undercover. If, however outside storage cannot be avoided, boards should be stored flat and off the ground.

IMPORTANT: The packaging alone cannot under any circumstances be relied upon to provide protection from moisture. Full protection in the form of tarpaulins or heavy gauge waterproof sheets must be provided at all times while on site. Boards that have been allowed to get wet must not be used.

Icopal is not responsible for damage when the above instructions are not followed.

Board Sizes

Length (mm)	1200
Width (mm)	600
Thickness (mm)	25, 30, 40, 50, 60, 80, 90, 100, 120, 130, 140, 160

Tapered Roofing: Thermazone® Torch-On insulation is available in a tapered version, tapering at 1:60 fall across a 1200 mm length.

Tapered Board	
Length (mm)	1200
Width (mm)	1200
1:60 Thickness (mm)	30-50; 50-70, 70-80, 80-100

Jumper/Packer Board	
Length (mm)	1200
Width (mm)	1200
Thickness (mm)	80

Thermazone® XtraFall Taper System

A Thermazone® XtraFall Torch-On System provides the designer and contractor with a precise, technically excellent solution to providing thermal insulation and bespoke drainage on a flat roof. A Thermazone® XtraFall Taper System comprises factory laminated boards and factory cut hip and valley pieces which allow for the creation of mitres without on-site cutting thereby reducing installation times, cutting errors and the associated labour and waste costs. Each component is clearly identified by board type and the direction of fall.

Typical Specification

The insulation to be Thermazone® Torch-on Insulation, as supplied by Icopal Limited, Barton Dock Road, Stretford, Manchester M32 0YL. Tel: 0161 865 4444 Fax: 0161 865. The insulation is to be installed in accordance with Icopal's instructions and the requirements of 'BS 8217: Reinforced bitumen membranes for roofing - Code of practice'.

NBS Specification

Thermazone® Torch-On Insulation is specified using the following:

Clause: J41/420

Product: Thermazone® Torch-On Insulation.

Manufacturer: Icopal Ltd. Barton Dock Road, Stretford, Manchester, M32 0YL. Tel: 0161 865 4444.



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Pack Sizes

For board quantities per pack see tables below.

Flat Board	
Board Thickness (mm)	Pack Size (No. Boards)
25	18
30	14
40	12
50	10
60	8
80	6
90	5
100	5
120	3
130	3
140	3
160	3

Tapered Board	
Board Thickness (mm)	Pack Size (No. Boards)
20 - 40	8
40 - 60	6
60 - 80	4
80 - 100	4

Packer/Jumper Board	
Board Thickness (mm)	Pack Size (No. Boards)
80 mm	6

Technical Services

Specialist advice and design guidance on all matters relating to this product, including tapered insulation design, is freely available from our Technical Department at the address below.

Quality Assurance

Thermazone[®] insulation is manufactured to BS EN 13165 and supplied under a Quality Management System approved to *ISO 9001: 2008* and an Environmental Management System approved to *ISO 14001: 2004*, by BSI Quality Assurance.



QMS: Q5556



EMS 535978

Health and Safety

Health and safety data sheets are available for all materials. Please contact Icopal's Technical Services Department for further information.

NOTE: This information is given in good faith being based on the latest knowledge known to Icopal Limited. Whilst every effort has been made to ensure the contents of the publication are current while going to press, customers are advised that products, techniques and Codes of Practice are under constant review and liable to change without notice. Up to date information is available from our Technical Services Department on request.

Responsibility cannot be accepted for the application of products, and no claims can be considered, where the manufacturer's instructions have not been followed. The user should not assume, based on information provided in this sheet, that the product is suitable for any abnormal use.

All products are sold subject to our standard conditions of sale, available on request.