



the knowledge to produce solutions



DCT GA 300

floor, wall and roof insulation

extruded polystyrene XPS
floor, wall and roof



DCT GA

xps floor, wall and roof insulation



FLOOR

Description

The specification of insulation for ground floors is more complex than that for walls or roofs. This is because the mechanisms for heat flow are affected by the ratio of surface area to perimeter.

DCT GA extruded polystyrene is ideal for insulating ground bearing concrete floors and suspended floors in by providing excellent long term thermal insulation and the ability to maintain this characteristic under extreme conditions of compression, humidity and temperature. The exceptional compressive strength enables **DCT GA** to easily resist several tons/m² downward pressure.

The **DCT GA** boards are rot proof, stable and durable and will have a life equivalent to that of the structure in which they are incorporated.

The closed cell structure of **DCT GA** foam makes water absorption almost non-existent and provides a high resistance to vapour transmission.

Exceptional Strength

- Proven long term performance
- High resistance to settlement and compaction
- Dimensional and edge profile stability

Excellent moisture performance (closed cell structure)

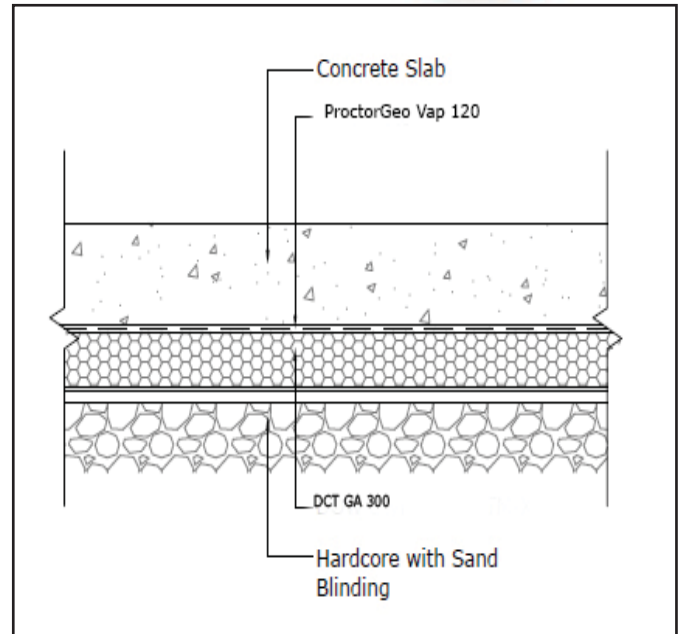
- Very high resistance to moisture penetration
- Low vapour permeability
- High resistance to freeze thaw cycles
- Durability provides long term retention of these properties

Superior thermal resistance

- Low thermal conductivity
- Thinner boards required compared to some traditional materials

Health and Safety

- CFC and HCFC free formulation
- Zero ozone depletion potential (ODP)
- Green Star Compliance
- Non-irritant, light and easy to handle
- Clean, easy cutting, robust and inherent weather resistant
- Specially designed tongue and grooved edge profiles to facilitate rapid and robust installation
- Manufactured in strict European laws in accordance with EN 13164 : 2001, Section 4.2 and the relevant parts of Section 4.3



Location: **DCT GA** is laid directly onto level slab. In addition, **DCT GA** can be placed vertically around the edge of the slab inside the form-work.

Preparation: Confirm with a structural engineer for the required compressive strength required.

Installation: Lay non-porous rigid board directly onto the levelled ground that will be under the slab, excluding footings and structural beams. Lay separating damp proof membrane (DPM) above the GA300, lapping 100mm at joints.

Specification: Minimum compressive strength not less than 300 kPa. Minimum compressive.

Fire: Smoke developed (AS 1530.3) <5

Specification Clause

DCT GA extruded polystyrene general application board should be described in the specification as: -

The insulation shall be **DCT GA** _____mm non-porous cellular extruded polystyrene (XPS) foam panel with minimum compressive strength _____ kPa. Zero ODP, CFC and HCFC free. **DCT GA** extruded polystyrene general application board is distributed by Dynamic Composite Technologies - T: 1800 051 100.

DCT GA

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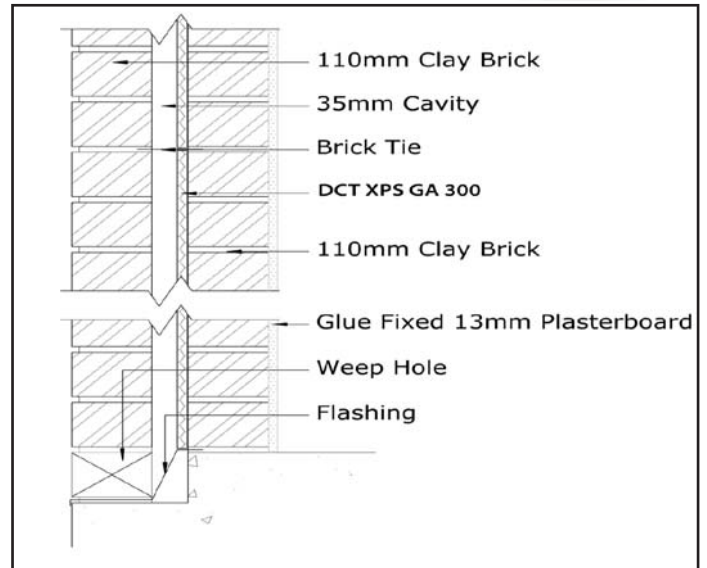
WALL

Description

DCT GA extruded polystyrene is ideal for insulating

The **DCT GA** boards are rot proof, stable and durable and will have a life equivalent to that of the structure in which they are incorporated.

The closed cell structure of **DCT GA** foam makes water absorption almost non-existent and provides a high resistance to vapour transmission.



| | |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General Location: | To the inner masonry skin (cavity side). |
| Material Insulation: | DCT XPS GA 300 |
| Fixing: | Proprietary plastic clips on pre installed wall ties. |
| Installation: | Lengthways with the tongue to the top edge and firmly against the inner masonry skin. Keep boards clean and dry and free from mortar and grout. Do not bridge the cavity. |
| Flashings: | Install flashings prior to installing insulation panels. Prevent entry of water behind the insulation boards. |

ROOF

| | |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Preparation: | Ensure membrane is clean and free of loose material. |
| Installation: | Lay insulation boards in brick pattern with tongue and groove pushed together firmly, cut neatly around penetrations and extended up upstands. |
| Separation layer: | Lay ProctorWrap IRMA over insulation with edges lapped 300mm and turned down at upstands and penetrations. |
| Insulation: | DCT XPS GA 300 |

Roofs with insulating membrane protection are also known as IRMA (inverted roof membrane assembly) or PMR (protective membrane roof).

Specify separation layer in the Waterproofing – external and tanking worksection, or delete if not required.


Using DCT XPS GA 300 above the slab will minimise the risk of condensation below the slab. Care, should be taken in allowing builders to remove insulation above the slab as condensation may result in toxic mould formation. [Size] – Determined by required material R-value and k-value. In a ventilated space, the reflective foil values are diminished.

There are a large number of factors that need to be considered in assessing and managing condensation risk. Such factors include the local climate, building use, position, thickness and type of insulation, position and integrity of vapour barriers, and the degree and location of mechanical or passive ventilation both in the roof space and the interior. It is highly recommended that designers undertake a condensation risk analysis. The above design is typically for cold and temperate climates.

DCT GA

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| Product Name | DCT GA Floor, wall and ceiling XPS Insulation | | | |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------|-------------------------------------------------------------------------------------|
| Product Description: | Non-porous, closed cell, high performance, rigid extruded polystyrene insulation board used for insulating ground bearing concrete floors and suspended floors in cold stores and freezers | | |  |
| Composition and Surface finish: | Closed cell extruded polystyrene, surface skin | | | |
| Product Code: | DCT GA | | | |
| Colour: | Sand | | | |
| Edge Profile: | Tongue and grooved or butt edge on all edges | | | |
| Width: | 600 mm | | | |
| Length: | 2500 mm to 4000 mm | | | |
| Thicknesses available: | 25, 30, 35, 40, 50, 60, 75, 80, 90, 100 and 120 mm | | | |
| Compressive Strength: | GA300 $\geq 300\text{kPa}$ | GA400 $\geq 400\text{kPa}$ | GA500 $\geq 500\text{kPa}$ | GA700 $\geq 700\text{kPa}$ |
| Water vapour resistivity: | 350-950 MNs/gm | | | |
| Water absorption: | ≤ 0.7 % vol | | | |
| Fire Classification AS1530.3 | 7,0,2,5 | | | |

| Nominal thickness to R-Value DCT GA XPS Insulation @ 24°C | | | | |
|--------------------------------------------------------------|---------------------------------------------------|---------------------------------------------------|----------------------------------------------------|------------------------------------------------------------------------------------------|
| Nominal Thickness (mm) | DCT GA300 R-Value (0.028m ² K/W) | DCT GA400 R-Value (0.028m ² K/W) | DCT GA500 R-Value (0.028 m ² K/W) | DCT GA700 R-Value (0.034 m ² K/W) <60 (0.036 m ² K/W) >60 |
| 25 | 0.9 | 0.9 | 0.9 | 0.7 |
| 30 | 1.1 | 1.1 | 1.1 | 0.9 |
| 35 | 1.3 | 1.3 | 1.3 | 1.0 |
| 40 | 1.4 | 1.4 | 1.4 | 1.2 |
| 50 | 1.8 | 1.8 | 1.8 | 1.5 |
| 60 | 2.1 | 2.1 | 2.1 | 1.8 |
| 75 | 2.7 | 2.7 | 2.7 | 2.1 |
| 80 | 2.9 | 2.9 | 2.9 | 2.2 |
| 90 | 3.2 | 3.2 | 3.2 | 2.5 |
| 100 | 3.6 | 3.6 | 3.6 | 2.8 |

Delivery, handling and storage

DCT GA extruded polystyrene insulation boards are delivered shrink-wrapped. **DCT GA** is light, rigid and clean and pleasant to handle and install. It is easily cut to size or trimmed using a knife or saw. **DCT GA** should be stored flat in a ventilated area and protected from accidental damage, contact with volatile solvents, flames and extended exposure to UV and sunlight.

technical hotline: 1800 051 100

about dctech

Dynamic Composite Technologies, or as we are now known DCTech, has been serving the Australian building industry with an extensive portfolio of technically advanced thermal insulation, geotextile membranes, rainscreen cladding brackets and fibreglass reinforced plastic wall and ceiling liner panels - which have been tried and tested to Australian building codes and standards.

This diverse portfolio provides DCTech with the ability to consider the building envelope holistically and hence develop a 'total system solutions' for a wide range of building applications. DCTech total system solutions incorporate high-performance building materials and innovative solutions which are designed to meet the continuously evolving requirements of the Australian building industry.

DCTech total system solutions address the risk of interstitial condensation, affords BCA, NCC and Greenstar compliant thermal efficiency and optimum acoustic and fire performance.

Ensure you specify the right system for the right application, look for the orange 'Powered by DCTech' stamp of approval.



Dynamic Composite Technologies Pty Ltd

Sydney Office

Unit 8, 171-175 Newton Rd
Wetherill Park 2164
T (02) 8788 9555
F (02) 9604 7468
E nsw@dctech.com.au

Melbourne Office

12 Agosta Drive
Laverton North VIC 3026
T (03) 9369 7920
F (03) 9369 4043
E vic@dctech.com.au

Queensland

Chevron Island LPO
PO Box 204
Chevron Island QLD 4217
T 0409 424 517
E qld@dctech.com.au

Western Australia

Williams Road
Kelmescott WA 6111
T 1800 051 100
E wa@dctech.com.au