Damplas Radon Gas Barrier 400

- Complies with new BBA regulations for radon protection membranes in line with BS8485:2015+A1:2019 and NHBC guideline revision 01/24
- Conforms to BR 211:2015 – industry guidance for Radon Gas protection
- Increased thickness (1600g) for greater protection from Radon Gas and damage during construction
- Also acts as a Damp Proof Membrane

DESCRIPTION

Damplas Radon Gas Barrier 400 is manufactured from a controlled blend of virgin polythene for use in buildings as a barrier to the ingress of harmful Radon Gas. It also serves as a damp proof membrane and can be used in most common flooring constructions but is not intended for use where there is the risk of hydrostatic pressure. Damplas Radon Gas barrier and ancillary components must be used in accordance with the recommendations in the most recent edition of Building Research Establishment Report BR 211.

SYSTEM ACCESSORIES

Damplas double-sided jointing tape
Single sided jointing tape
Top hats for pipe penetrations
Damplas CPT Plus DPC
Damplas pre-formed cloak units
Damplas Radon Sump

NDC Polipak Ltd
1 Garratts Lane
Cradley Heath
B64 5RE

t +44 (0) 121 561 6700
f +44 (0) 121 559 0230
enquiries@ndcpolipak.com
www.ndcpolipak.com

DAMPLAS RAD 400

COMPOSITION

Manufactured from blown polythene film, Damplas Radon Gas barrier consists of a red polythene sheet of nominally 400 Micron thick.

APPLICATION

Damplas Radon Gas barrier is designed for use in areas at risk from harmful radon gas.

Exposure to radon risk varies throughout the British Isles therefore builders and developers should consult BRE Report 211 to establish areas of risk and whether ‘full’ or ‘basic’ and for avoidance of any doubt consult the local Building Control Officer.

INSTALLATION

Once you have determined whether you need “basic” or “full” protection, you must check that your preferred ground floor construction gives you the right level of protection. The options are as follows:

BASIC RADON PROTECTION

For “basic” protection, you need to provide an airtight barrier covering the entire ground floor of the building, linked to the damp proof course using cavity trays which prevent radon moving through the wall cavity and into the building. All junctions between the floor membrane and cavity trays should be sealed. You can achieve “basic” protection with both ground supported and suspended (ventilated) concrete ground floors by installing a radon-proof membrane system. With a suspended concrete slab, the space beneath the floor is available to ventilate radon safely away should “full” protection be required.

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DAMPLAS
RAD 400

FULL RADON PROTECTION

For “full” protection, in addition to providing a radon-proof floor membrane, an underfloor depressurisation system must be provided. Depressurisation can be achieved by natural or mechanical underfloor ventilation through the subfloor space, or from a radon sump if there is no underfloor space. The full system consists of:

- Damplas Radon Jointing System, prevents radon ingress at joints,
- Damplas Top Hat Units prevents radon ingress at pipe penetrations,
- Damplas Radon Sumps, where subfloor depressurisation is required.

Damplas Radon Gas barrier and ancillary components must be installed in accordance with the recommendations of Building Research Establishment BRE 414 “Protective measures for housing on gas contaminated land”, NHBC guidelines and the Chartered Institute of Environmental Health Ground Gas Handbook. The product is not intended for use where there is the risk of hydrostatic pressure. The membrane should be installed on a compacted sand blinding layer or smooth concrete float finish allowing adequate overlap for jointing between the sheets and avoiding bridging (i.e. areas of unsupported membrane). To avoid slip or shear planes and high compressive loadings it is not recommended to take the membrane through the wall. In order to provide a continuous barrier across the cavity Damplas CPT Plus should be taken through the blockwork and incorporated below the damp proof course cavity tray in the outer leaf. Laps should be joined together using the Damplas Gas Barrier Jointing System.

JOINTING THE RADON GAS BARRIER

Damplas Radon barrier should be overlapped by at least 150mm and sealed using Damplas Double-sided Jointing Tape. The joint should be secured with Damplas Single Sided Jointing Tape. The membrane should be clean and dry at the time of jointing.

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DAMPLAS RAD 400

COVERING

Damplas Radon Gas barrier should be covered as quickly as possible with a protective layer once installed and care taken so the membrane is not punctured stretched or displaced when the screed or final floor covering is applied. 50mm minimum thickness of screed is recommended and when reinforced concrete is to be laid over the product the wire reinforcement and spacers must be prevented from contacting the membrane.

STORAGE AND HANDLING

The membrane should be stored under cover, the material is not suitable to be exposed to long periods of weathering as UVI light will cause the product to become brittle. All jointing tapes should be stored in a dry area and installation is not recommended below 5°C.

TECHNICAL DATA - CE MARK

Damplas Radon Gas barrier complies with the requirements and clauses of EN 13967: 2012 – Flexible sheets for waterproofing - Plastic and rubber damp proof sheets including plastic and rubber basement tanking sheet.

The British Board of Agrement performed the initial inspection of the manufacturing plant and factory production control, the continuous surveillance, assessment and evaluation of factory production control, and issued the certificate of constancy of conformity of the factory production control. 0836–CPR – 13/F048 applies. EN 13967 : 2012

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PERFORMANCE TEST DATA

Characteristic	Test method	Units	Standard	Result
Visible defects	EN 1850 -2	-	Pass/Fail	Pass
Length	EN1848 – 2	M	-0%/+10%	20
Width	EN1848 – 2	M	-2.5%/+2.5%	4
Straightness	EN1848 – 2	-	Pass/Fail	Pass
Thickness	EN1849 – 2	Mm	-12.5%/+12.5%	0.4
Mass	EN1849 – 2	g/m^2	-12.5%/+12.5%	273
Tensile strength – MD	EN 12311	N/mm^2	>MLV	20
Tensile strength - TD	EN 12311	N/mm^2	>MLV	20
Tensile elongation – MD	EN 12311	%	>MLV	520
Tensile elongation - TD	EN 12311	%	>MLV	665
Joint strength	EN12317 – 2	N	>MLV	138
Watertightness 2kPa	EN1928	-	Pass/Fail	Pass
Resistance to impact	EN 12691	Mm	>MLV	250
Durability (artificial ageing)	EN 1296 & 1928	-	Pass/Fail	Pass
Durability (chemical resistance)	EN 1847	-	Pass/Fail	Pass
Resistance to tearing (nail shank) – MD	EN 12310-1	N	MDV	210
Resistance to tearing (nail shank) – TD	EN 12310-1	N	MDV	185
Resistance to static loading	EN 12730	Kg	>MLV	Pass – 20kg
Water vapour transmission – resistance	EN 1931	MNs/g	MDV	1125
Water vapour transmission - permeability	EN 1931	$g/m^2/d$	MDV	0.2
Radon Permeability	SP Test Method	m^2/s	MDV	7.7×10^{-12}

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