



Chova
SISTEMAS DE IMPERMEABILIZACIÓN
Y AISLAMIENTO

ChovAFOAM 300 R

THERMAL INSULATION GROOVED PANELS.
EXTRUDED POLYSTYRENE. **XPS**
TECHNICAL FILE Nº 81980A - REVIEW 2/13 C E

INFORMACIÓN COMPLETA DE LOS PANELES AISLANTES ChovAFOAM 300 R



View "Declaración de Prestaciones – DoP" in: DoP_E_81980A_13164_CHOVAFOAM300R40_v02 (And other references)

View CE Trade, complete, in: DoP_E_81980A_13164_CHOVAFOAM300R40_v02 (And other references)

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Panel description:

Extruded polystyrene rigid foam panel, XPS, closed cell structure, usable as thermal insulation.

Uses according to: **Standards EN 13164, UNE 92325:2012 IN, UNE 104401 and "CEC" of CTE. (Constructive Elements Catalogue)**

Extruded polystyrene thermal insulation panel, XPS, of 1.250 mm x 600 mm and thickness according to type.
GROOVED. Finishing side, "half wood", to minimize thermal bridges.

Recommended for: inverted roof, sloping, with mortared tiles

Do not use at temperatures higher than 65° C. Fix or protect before the end of the day, from wind effects. Cover with tiles or protect from sun, preferably before 6-7 days.

STORAGE: with the original presentation and package protected from the sun (UV rays).

CHARECTERISTIC	VALUE	UNIT	STANDARD	
Reaction to fire. Euroclasses Features	Class E	--	EN 13501-1	
Combustion with continuous incandescence. (Test method under development. Value will be defined when applying the Standard)	NPD		PrEN xxx	
Water vapour permeability. Water vapour transmission	80	(μ)	EN 12086	
Thermal Resistance. Thermal Conductivity.	Thickness mm	R _D	EN 12667 / 12939	
$\lambda_D = 0,034 \text{ W / m K, from 40 mm to 60 mm}$	40	--		m ² K / W
	50	--		m ² K / W
	60	--		m ² K / W
$\lambda_D = 0,036 \text{ W / m K, from 80 mm}$	80	--		m ² K / W
Water permeability. Water absorption in long-term	≤ 0,7		EN 12087	
Compressive resistance. Compressive contraction in compressive strength.	≥ 300	kPa	EN 826	
Traction/bending resistance. Perpendicular to sides traction resistance	≥ 900	(σ _m TR900)	EN 1607	
Reaction to fire durability regarding to heat exposure, out in the open, aging/degradation	NPD			
Thermal resistance durability regarding to heat exposure, out in the open, aging/degradation	NPD			
Compressive resistance durability regarding to aging/degradation	NPD			
CE DESIGNATION CODE	EN 13164 - T1 - DS(70,-) – DS (23,90) - DLT(2)5 - CS(10/Y)300 - WL(T)0,7			

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NO REGULATORY INFORMATION. (CE)

Other characteristics not included in the "DoP".

FEATURES	VALUE	UNIT	STANDARD
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Tolerances	Thickness tolerances (Δd)	+2; -2 (30-40)	mm	EN 823
	Squaring (S_b)	+3; -2 (≥ 50)	mm/m	EN 824
	Planimetry (S_{max})	≤ 5	mm/m	EN 825
Stability	Dimensional stability ($\Delta \epsilon$) (70 °C and 90 %) Squaring (S_b)	≤ 5	%	EN 1604
	Deformation under load and temperature ($\Delta \epsilon$) (70 °C, 168h, 40kPa)	≤ 5	%	EN 1605
Mechanical Behaviour.	Perpendicular to sides traction (σ_{mt})	> 100	kPa	EN 1607
	Compression yield strength (σ_c) 2 % in 50 years	125	kPa	EN 1606
Behaviour facing water	Water absorption total immersion (W_P)	$\leq 0,7$	%	EN 12087
	Water absorption by diffusion (W_d)	5	%	EN 12088
Behaviour facing ice	Freeze-thaw resistance ($\Delta \sigma_{10}$)	< 10	%	EN 12091
	Freeze-thaw resistance (ΔW_{it})	≤ 1	%	EN 12091

ChovAFOAM 300 R are high performance rigid extruded polystyrene insulant manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP).

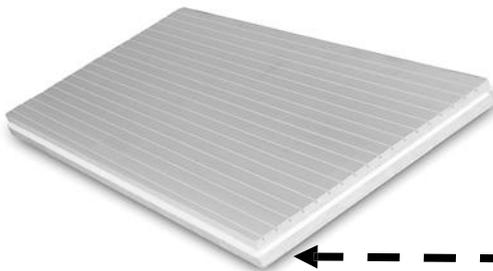


**Product with AENOR
Trade (According to UNE-EN
13164)**

Provided information corresponds to data obtained in our own laboratories. This product will maintain these characteristics on average. ChovA, S.A. reserves the right to modify or cancel any parameter without notice. ChovA, S.A guarantee is only applying to the product quality.

As for commissioning work, which do not participate, they must also meet the requirements in the applied standards, both in facade composition and the realization of the different layers.

This technical data sheet will be void by subsequent revisions and, if in doubt, apply the latest revision



Grooved surface finished, presentation indicated as sloping roof insulation. For tiles application, with mortar piles or another fixing material, adequate and compatible.

ChovAFOAM GROOVED. **300 R40; R50; R60 and R80**. TYPES

Perimeter fitting in all four edges. ("STEPPED" or "HALF WOOD" fitting)

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RECOMMENDATIONS FOR USE, SUITABLE TO “CTE”, ACORDING TO:

- DR of CTE, CEC, “Constructive Elements Catalogue”, and
- Standard UNE 92325:2012 IN Thermal insulation products in buildings. Setup Control
- Standard UNE 104401: 2013, "Waterproofing in the building above and below ground level, with modified bituminous sheets. Systems and application.

For constructive solutions and its application further information may consult the " Waterproofing manual..." by ChovA.

The recommended usual use possibilities of the XPS insulating panels **ChovAFOAM 300 R, GROOVED**, are:

INVERTED ROOF.

- INSULATING FOR **HEAVY PROTECTED ROOFS**:

- **SLOPING ROOF**.- (Slopes between 15 % and 40 %)

Sloping roofs with “Heavy protection”. With MORTARED tiles.

Roofs designed to drain water using the slope and finished with discontinuous coverage items (tiles, etc.).

- **NOT WALKWAY** Roofs, with mortared tiles protection. According "CEC" solutions, Roof type: 4.1.9. (see DB-HS1). According to Standard UNE 104401: 2013 membrane type, MI-T

According to the covering material used, mortared tiles, for slopes less than 32 %, is necessary to apply a previous waterproofing, formed by a layer of sheets **LBM-30 (*)** type or higher. For other tiles type, check the minimum safety slope, according to DB-HS1, Table 2.10:

(*) Should be **POLITABER POL PY 30** or **POLITABER VEL 30** o higher types. (Consult if necessary with Technical Department).

Insulating layer performance conditions.

Panels application. Single layer

If needed, on the waterproofing membrane adhered and mechanically fixed to support, thermal insulation panels will be applied. If waterproofing is not required, the panels are fixed directly on the support. (Set them during application or before the end of the day, to avoid wind effects).

The panels shall be of extruded polystyrene, XPS, **ChovAFOAM 300 R**. The finish of the panels will be grooved upper face, and tiles will be applied with mortar piles.

Panels always be applied so that the grooves are parallel with the eave edge. (Perpendicular to the slope). Thereby ensuring the stability of the tile against slipping.

Will always be, mechanically fixed to the support, with 5 fixations, at least, by panel. Located at the vertices, spaced about 5 - 10 cm of them, and one in the centre. Depending on the slope and roof features, you can increase the number of fixations. (They go through the waterproofing membrane because in sloped roof, does not affect the tightness).

In any case, always ensuring the roof stability against possible displacements produced by loading it.

Finally, the tiles will be adhered to the roof applying mortar piles in adequate amounts and proportions, so as to ensure their stability, against slipping or other charges that may occur on them. (Can use other methods or materials suitable for its use, provided that they ensure compatibility between them).

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Panels application. Two or more layers

Applied to any needed thickness, over 60 mm.

The appropriate total thickness may also be obtained by applying two or more layers of panels, with the same or different thicknesses, as long as their sum equals the necessary under DB-HE. In this case, only will require to be grooved the last layer and the lower could be smooth finish.

1st layer will extend as indicated, and then the 2nd layer will be extended on 1st. The panels of the 2nd layer will start its application cutting them approximately in half and displacing from the 1st layer, so that no matching the joints between both layer panels, If more layers, the defined process will be repeated.

According to work process, you can fix each of the panels layers applied, or fix the last as the same time than previous. In any case, fittings of the last layer should be anchored in the slab, and never only in the lower insulation layers.

Shall be obviously maintained, the single layer precautions in the previous case.

Warnings.

In any case, XPS panels, outside the usual package must be secured or protected by the end of the day, from wind effects. Cover preferably with roof tiles before 6-7 days, or protect panels from the sun in the event of delayed application of the tiles.

OTHER USES.-

Because the **ChovAFOAM 300 R**, type is obtained when making the characteristic grooves, by mechanised of **ChovAFOAM 300 M** panels, may, in general, replace them in usual uses, provided that the presence of grooves justifies its use.

Therefore, in the event other uses different than intended, it should apply recommendations given for "M" type, which can be seen in the FT 81905A.

	<h1>ChovAFOAM 300 R</h1>
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GENERALITIES: ISOLATION LAYER IMPLEMENTATION AND MORTARED TILES OR OTHER HEAVY PROTECTION APPLICATION.

- On the roof, keep XPS panels in their original packaging until use. Loose XPS panels on the roof or out of the usual packages, should be protected from sun and wind effects, before the end of the day.

- In bad weather conditions, do not apply insulation layers, separators, etc. (Or protect immediately when changes in starting conditions).

- The application of the heavy protection should be performed as soon as possible. We recommend not to take more than 6-7 days before applying tiles. (But always with panels initially set). Or protect panels from the sun, in the case of be delayed application of the tiles.

- It must ensure that the panels have adequate density fixations for loads expected in the protection layer, mortared tiles or adhered with other materials, considering the roof slope. (For other slopes than those established by legislation, must ensure the whole system stability).

- We should make a subsequent maintenance of the roof, in the foreseen periods by the regulations or in the CTE.

SAFETY CONDITIONS.

Regarding the safety and health during the execution of the works, shall apply the provisions of the legislation in relation to the prevention of occupational risks.

Personnel performing the isolating system should know the risks involved in their implementation and the correct component units of the work laying method, all within the overall regulatory framework for health and safety that is bound the general contractor of the work.

All solutions above, the application conditions and comments are set to:

- DR of CTE, CEC, "**Constructive Elements Catalogue**", and
- **UNE 92325:2012 IN Thermal insulation products in buildings. Control installation.**
- **Standard UNE 104401: 2013, "Waterproofing in building above and below ground level, with modified bituminous sheets. Systems and application."** (**AENOR Document**)

The insulation layers are a constitutive element of work. The solutions are responsibility of the project, although the information is intended to describe the usual conditions of product use. As for commissioning work also must satisfy the insulating layer implementation requirements. Provided information is taken from the current regulations.