

SYNTHOS XPS PRIME G 25

Extruded polystyrene board

Declaration of Performance

no. SD/PG25/2022/02

Date of compilation: 2022-10-01

1. Unique identification code of the product-type:

Synthos XPS PRIME G 25

2. Intended use:

Thermal insulation for buildings

Thermal insulation for building equipment and industrial installations

Thermal insulation and light weight fill products for civil engineering applications.

3. Manufacturer:

Synthos Dwory 7 spółka z ograniczoną odpowiedzialnością
ul. Chemików 1
32-600 Oświęcim
POLAND

4. System of assessment and verification of constancy of performance:

System 3

5. Harmonised standards: EN 13164:2012+A1:2015; EN 14307+A:2013; EN 14934:2007

Notified Bodies:

Instytut Techniki Budowlanej (NB 1488)

Universität Stuttgart für die Materialprüfungsanstalt Universität Stuttgart (NB 0672)

Forschungsinstitut für Wärmeschutz e. V. München FIW München (NB 0751)

6. Declared performances - Table no.1

Essential characteristics	Performance		Harmonized technical specification
Thermal resistance	Thermal resistance and thermal conductivity	Table no. 2, below	EN 13164:2012+A1:2015
	Thickness		
Reaction to fire	Euroclass characteristic	Euroclass E	EN 13164:2012+A1:2015
Durability of reaction to fire against heat, weathering, ageing/degradation	Durability characteristics	No change	EN 13164:2012+A1:2015

Durability of thermal resistance against heat, weathering, ageing/degradation	Thermal resistance and thermal conductivity	Table no. 2, below	EN 13164:2012+A1:2015
	Durability characteristics	DS(70,90)	EN 13164:2012+A1:2015
	Freeze-thaw resistance after long term water diffusion test	NPD	EN 13164:2012+A1:2015
	Freeze-thaw resistance after long term water absorption by total immersion	FTCI2	EN 13164:2012+A1:2015
Compressive strength	Compressive strength at 10% of deformation	CS(10/Y)250	EN 13164:2012+A1:2015
Tensile/flexural strength	Tensile strength perpendicular to faces	TR100	EN 13164:2012+A1:2015
Durability of compressive strength against ageing/degradation	Compressive creep	NPD	EN 13164:2012+A1:2015
Water permeability	Long term water absorption by total immersion	WL(T)0,7	EN 13164:2012+A1:2015
	Long term water absorption by diffusion	Table no. 3, below	EN 13164:2012+A1:2015
Water vapour permeability	Water vapour transmission	MU150	EN 13164:2012+A1:2015
Release of dangerous substances to the indoor environment	Release of dangerous substances	NPD	EN 13164:2012+A1:2015
Glowing combustion	Continuous glowing combustion	NPD	EN 13164:2012+A1:2015
Reaction to fire Euroclass characteristic	Reaction to fire	Euroclass E	EN 14307:2009+A1:2013
Water permeability	Short term water absorption by partial immersion	WS(0,5)	EN 14307:2009+A1:2013
Thermal resistance	Thermal conductivity	In whole temperature service range - table no. 4	EN 14307:2009+A1:2013
	Dimensions and tolerances		EN 14307:2009+A1:2013
Water vapour permeability	Water vapour transmission properties	MU150	EN 14307:2009+A1:2013
Compressive strength	Compressive strength at 10% of deformation	CS(10/Y)250	EN 14307:2009+A1:2013

Rate of release of corrosive substances	Trace quantities of water soluble chloride ions	NPD	EN 14307:2009+A1:2013
	Trace quantities of water soluble fluoride ions	NPD	EN 14307:2009+A1:2013
	Trace quantities of water soluble silicate ions	NPD	EN 14307:2009+A1:2013
	Trace quantities of water soluble sodium ions	NPD	EN 14307:2009+A1:2013
	pH value	NPD	EN 14307:2009+A1:2013
Release of dangerous substances to the indoor environment	Release of dangerous substances	NPD	EN 14307:2009+A1:2013
Glowing combustion	Continuous glowing combustion	NPD	EN 14307:2009+A1:2013
Durability of reaction to fire against ageing/degradation and high temperature	Durability characteristics	No change	EN 14307:2009+A1:2013
	Maximum service temperature	NPD	EN 14307:2009+A1:2013
Durability of thermal resistance against ageing/degradation and high temperature	Thermal conductivity	In whole temperature service range - table no. 4	EN 14307:2009+A1:2013
	Dimensions and tolerances		EN 14307:2009+A1:2013
	Durability characteristics	(a)	EN 14307:2009+A1:2013
	Maximum service temperature	NPD	EN 14307:2009+A1:2013
Reaction to fire	Reaction to fire	Euroclass E	EN 14934:2007
Glowing combustion	Continuous glowing combustion	NPD	EN 14934:2007
Resistance against dynamic loads	Resistance against cyclic compressive loading	NPD	EN 14934:2007
Water permeability	Long term water absorption by total immersion	WL(T)0,7	EN 14934:2007
	Long term water absorption by diffusion	NPD	EN 14934:2007
Release of dangerous substances to the indoor environment	Release of dangerous substances	NPD	EN 14934:2007
Thermal resistance	Thermal resistance and thermal conductivity	Table no. 2, below	EN 14934:2007
	Thickness		EN 14934:2007
Water vapour permeability	Water vapour transmission	NPD	EN 14934:2007

Compressive strength	Compressive strength at 2% of deformation	CS(2/Y)100	EN 14934:2007
	Compressive strength at 5% of deformation	CS(5/Y)200	EN 14934:2007
	Compressive strength at 10% of deformation	CS(10/Y)250	EN 14934:2007
Tensile/flexural strength	Flexural strength	Table no. 5, below	EN 14934:2007
Durability of reaction to fire against heat, weathering, ageing/ degradation	-	No change	EN 14934:2007
Durability of thermal resistance against heat, weathering, ageing/ degradation	Thermal resistance and thermal conductivity	Table no.2, below	EN 14934:2007
	Dimensional stability at 23°C and 90% relative humidity	NPD	EN 14934:2007
	Dimensional stability at (70 °C)	NPD	EN 14934:2007
	Dimensional stability at 70°C and 90% relative humidity	DS(TH)	EN 14934:2007
	Deformation under specific conditions of compressive load of 40 kPa and at temperature of 70°C	NPD	EN 14934:2007
	Freeze-thaw resistance	NPD	EN 14934:2007
Durability of compressive strength against ageing/ degradation	Compressive creep	NPD	EN 14934:2007
	Freeze-thaw resistance	NPD	EN 14934:2007
Durability of resistance against dynamic loads	Resistance to cyclic compressive load	NPD	EN 14934:2007
Durability of resistance against chemical and biological agents	-	NPD	EN 14934:2007

- (a) According to B appendix to EN 14307+A:2013, the declared values of thermal resistance factor (as in table 2) comprise changes of thermal conductivity of Synthos XPS PRIME G in time.

Table no. 2. Heat values for particular thickness

Thickness In the class of tolerance T1 [mm]	Coefficient of thermal conductivity λ_D [W/mK]	Thermal resistance R_D [m ² K/W]
20	$\leq 0,033$	$\geq 0,60$
30	$\leq 0,033$	$\geq 0,90$

Table no. 3. Long term water absorption by diffusion for particular thickness

Thickness [mm]	Long term water absorption by diffusion – declared level
20	WD(V)5
30	WD(V)4

Table no. 4. Heat values for particular thickness in whole temperature service range

Thickness In the class of tolerance T1 [mm]	Coefficient of thermal conductivity λ_D [W/mK] at -60°C	Coefficient of thermal conductivity λ_D [W/mK] at +10 °C	Coefficient of thermal conductivity λ_D [W/mK] at +70 °C
20	0,026	0,033	0,040
30	0,026	0,033	0,040

Table no. 5 Flexural strength for particular thickness

Thickness [mm]	Flexural strength – declared level	Flexural strength – value of pressure [kPa]
20	BS600	≥ 600
30	BS500	≥ 500

The performance of the product identified above is in conformity with the set of declared performances. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Chairman of the Board



Artur Pawłowski

Oświęcim, 2022-10-01

