SYNTHOS XPS PRIME S 70 I TB

Extruded polystyrene board

Declaration of Performance
no. SD/PS70I-TB/2023/01
Date of compilation: 2023-01-01

1. **Unique identification code of the product-type:**
   Synthos XPS PRIME S 70 I TB

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, in case reaction to fire – system 4

5. **Harmonised standards: EN 13164:2012+A1:2015; EN 14307+A:2013; EN 14934:2007**
   Notified Bodies:
   Instytut Techniki Budowlanej (NB 1488)
   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 F	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
		DLT(2)5	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	NPD	EN 13164:2012+A1:2015
Compressive strength	Compressive strength at 10% of deformation	**CS(10/Y)700**	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	NPD	EN 13164:2012+A1:2015
Water vapour permeability	Water vapour transmission	NPD	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 F	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	NPD	EN 14307:2009+A1:2013
	Dimensions and tolerances		EN 14307:2009+A1:2013
Water vapour permeability	Water vapour transmission properties	NPD	EN 14307:2009+A1:2013
Compressive strength	Compressive strength at 10% of deformation	**CS(10/Y)700**	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	NPD	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 F	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)300**	EN 14934:2007
	Compressive strength at 5% of deformation	**CS(5/Y)600**	EN 14934:2007
	Compressive strength at 10% of deformation	**CS(10/Y)700**	EN 14934:2007
Tensile/flexural strength	Flexural strength	NPD	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	**DLT(2)5**	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 S 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^2K/W]
120	≤ 0,034	≥ 3,50
140	≤ 0,034	≥ 4,10
150	≤ 0,034	≥ 4,40
160	≤ 0,034	≥ 4,70
170	≤ 0,034	≥ 5,00
180	≤ 0,034	≥ 5,25
190	≤ 0,034	≥ 5,55
200	≤ 0,034	≥ 5,85

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, 2023-01-01