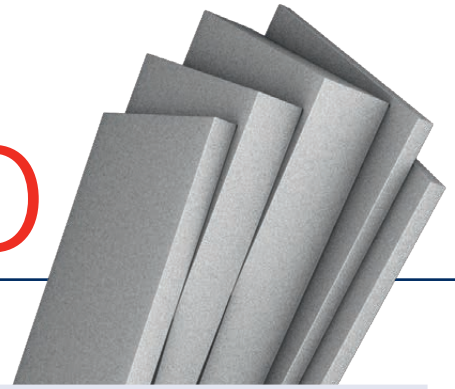


TENAPORS NEO



GENERAL DESCRIPTION

Foamed polystyrene sheets TENAPORS NEO – a brand new technological solution for insulation of the enclosing structures of buildings. The foamed polystyrene sheets TENAPORS NEO are a thermal insulation material with improved insulating properties which make it possible to reduce the thickness of an insulating layer by up to 20% compared to conventional white foam polystyrene. TENAPORS NEO sheets are silver-grey coloured, because they contain graphite which considerably increases thermal insulation efficiency ratios. The small graphite particles either reflect or absorb the infrared radiation, thus reducing heat loss considerably.

Foamed polystyrene products used in the construction industry serve as an efficient thermal insulation material with multiple uses. To ensure quality and efficient insulation of foundations, walls, floors or roofs, EPS materials are the best choice for any type of buildings, be it a residential house, an industrial, a public or an educational institution building.

Foamed polystyrene is a porous material with closed pores and flame retardant additives (substances that suppress combustion).

MAIN PROPERTIES

- The physical and mechanical properties of the foamed polystyrene material largely depend on its volume mass. With the higher volume mass, values of the strength parameters also increase, such as compressive, flexural and shear strength, which also determines the usage of the material
- The good insulating properties of the foamed polystyrene material arise from the high content of air pores. The foamed polystyrene material is made of approximately 98% air and 2% polystyrene. The efficiency of thermal insulation materials is characterized by thermal conductivity coefficient "lambda" λ (W/mK), which is one of the lowest in foamed polystyrene materials (in particular in TENAPORS NEO) and ensures the lowest level of heat loss.
- Polystyrene - the formative element of the foamed polystyrene is not a hygroscopic material, and even in direct contact with water it absorbs only a tiny amount of water! Since pore walls are waterproof, the water can merely run through the material or penetrate inside only through the channels between the pores
- Foamed polystyrene sheets TENAPORS NEO are UV light resistant
- They may be continuously used as a thermal insulation material at ambient temperatures of up to + 80°C.
- Foamed polystyrene does not rot, does not serve as a medium for bacteria and is eco-friendly. It is resistant to weak acidic, alkaline and saline solutions but non-resistant to aromatic and halogen containing solvents, esters, ketones, oils or lubricants

TECHNICAL DATA

Parameters	TENAPORS NEO				
	EPS 60	EPS 70	EPS 80	EPS 100	EPS 150
Compressive stress at 10% deformation (kPa)	60	70	80	100	150
Sustained load stability at 2% deformation, projected for 50 years (kPa)	18	21	24	30	45
Flexural strength (kPa)	≥ 100	≥ 115	≥ 125	≥ 150	≥ 200
Thermal conductivity coefficient at 10°C, λ_D (W/mK)	0.032	0.032	0.031	0.031	0.031
Sustained water absorption (volume %) when completely immersed in water	3.5	3.5	3.5	3.5	3.5
Reaction to fire	E				
Water vapour diffusion resistance factor μ	20–40	20–40	20–40	30–70	30–70
Density (kg/m ³)	14 ± 1	15 ± 1	18 ± 1	20 ± 1	27 ± 1
Sheet dimensions (mm)	500 × 1000; 1000 × 1000; 1000 × 1200; 1000 × 2000; 1200 × 2000; 1000 × 4000; 1200 × 4000				
Sheet thickness (mm)	From 20 mm to 1200 mm in 10 mm increments				
Type of sheet edges	Straight edge and half-lap joint				
Sheet colour	Silver-grey				

Upon request, sheets with non-standard dimensions can be produced (maximum possible dimensions 4 m × 1.2 m × 1 m).

The use of foamed polystyrene sheets with a half-lap joint helps to considerably reduce heat loss through the thermal insulation joints.



TENAPORS NEO

USAGE

Product types and name Usage in construction	TENAPORS NEO				
	EPS 60	EPS 70	EPS 80	EPS 100	EPS 150
Thermal insulation in stress-free structures <ul style="list-style-type: none"> In roofs between rafters In external framework walls In partition walls In wooden interfloor decks 					
External wall insulation, with a plaster finish	*	*	*	*	
Thermal insulation for concrete floors				*	*
Flat roof insulation				*	*
Insulation of the overground base section of the building					*

The sheets are used as a thermal insulation material in construction of:

- Walls
- Floors
- Roofs
- Other structures

The thickness and type of sheets shall be determined during the design process in compliance with the construction design regulations stipulated in the construction standards and other regulatory documents. The use of foamed polystyrene sheets with a half-lap joint helps to considerably reduce heat loss through the thermal insulation joints.

It is advisable to choose ETAG 004 certified plastering systems for external wall insulation.

EXAMPLES OF USAGE OF TENAPORS NEO

