

According to the specified recipes, the input liquid components A and B are mixed in special machines dedicated for that purpose; after pouring into a mould, the mixture expands into the specified block form with the required volume weight. The volume weight can be controlled by the recipe used. After maturation and stabilization, the blocks are formatted and then cut in a numerically controlled saw machine into boards of the specified thickness. These boards are in no way limited by the graded series, yet the thickness may be selected from 20 mm to 200 mm and upwards.

### What is PUR foam

Polyurethane foam is a macromolecular material on a primarily organic basis. It originates by mutual exothermic reaction through the polyaddition of diphenyl diisocyanate and the mixture of polyhydric polyester and polyester alcohols, activators, catalysts, stabilizers, fire retardants, water and auxiliary blowing agents. The emergent polyurethane compound is frothed and forms a closed microscopic cellular structure thanks to which the resultant PUR foam has excellent thermal insulation and water-proofing properties. Currently manufactured PUR foams no longer contain CFCs

### Polyurethane properties

The heat conductivity factor  $\lambda$  of polyurethane is very low, the lowest of all insulators in use. With regard to the closed-cell structure, the absorption balance is very low. This property is also one of the conditions to ensure water proofness.

### Water vapour diffusion

PUR foam features a low diffusion resistance factor with a value of  $\mu \leq 20$ , which means that the insulation layer excellently transmits water vapour pressure from the building's interior.

Hardened polyurethane as a foam is quite harmless and poses no health hazard. No harmful substances evaporate; this insulation has been certified by the Chief Health Officer even for rooms with indirect contact with foodstuffs, to which particularly strict requirements apply. Polyurethane is not attacked by fungi, insects or rodents; it is permanently resistant to decay. When handling polyurethane boards, particularly during their cutting, use personal protective equipment - protective work goggles and a face mask.

### Flammability

self-extinguishing types of polyurethane foam are commonly used. For PUR application in buildings, there are only restrictions resulting from building regulations and fire prevention standards. With regard to the low weight of PUR as an insulator, there is no substantial increase in fire Toad. To sum up, polyurethane is the right choice to be used in the building industry as it is an excellent insulation material for the thermal cladding of buildings, insulation of roof attics, garrets, etc.

<b>Basic characteristics</b>	<b>Unit</b>	<b>Value</b>	<b>Harmonised Standard</b>
Reaction to fire	Euroclass	E	EN 13501-1+A1:2010
Board dimensions	mm	1000x600	
Strength parameters			
Compression strength at 10 % deformation	kPa	CS (10/Y) 150	EN 13165:2012+A1:2015
Tensile strength perpendicular to the plane of the board	kPa	TR150	EN 13165:2012+A1:2015
Dimensional and shape stability	mm	T2	EN 13165:2012+A1:2015
Dimensional stability at 70 ° C and 90% rel. Humidity for 48 hours		DS(70,90) 4	EN 13165:2012+A1:2015
Short-term water absorption	Kg/m <sup>2</sup>	WS(P) 0,5	EN 13165:2012+A1:2015
Water vapor diffusion	$\mu$	MU(20)	EN 13165:2012+A1:2015
Bulk density	kg/m <sup>3</sup>	32-35	EN 13165:2012+A1:2015
Thermal conductivity	W.m-1.K-1	$\lambda_D = 0,022$	EN 13165:2012+A1:2015
Long-term water absorption - total immersion	%	WL(T) 3	EN 13165:2012+A1:2015
Long-term water absorption - partial immersion	%	WL(P) 0,5	EN 13165:2012+A1:2015

The dimensional tolerance of TPD-PUR 30/40 according to the ČSN EN EN 13165:2012+A1:2015

Tolerance length and width :	< 1000 mm	± 5 mm
	1000 - 2000	± 7,5 mm
Tolerance in thickness :		
Thickness of TPD-PUR 30/40 slabs	< 50 mm	± 2 mm
Thickness of TPD-PUR 30/40 slabs	50 – 75 mm	± 3 mm
Thickness of TPD-PUR 30/40 slabs	> 75 mm	+ 5 mm, - 2 mm
Perpendicularity of TPD-PUR 30/40 slabs		max. 5mm/m

### First aid

If health problems occur or when in doubt, seek medical help.

In case of inspiration, place the affected person in fresh air; in case of respiratory problems, seek medical help.

In case of contact with the skin, clean the skin with clean water and soap. Treat the irritated places with repair cream.

In case of eye contact, immediately wash the opened eyes with clean running water for 15 minutes and then seek medical help.

In case of swallowing, wash the mouth out with clean water, drink 0.5 litre of water and seek medical help. Do not induce vomiting.

Contact of the product with the skin may induce an allergic reaction. If the symptoms of any affection (irritation) caused by contact with the product do not subside after first aid is administered, seek medical help.

Store out of the reach of children!

### STORAGE AND TRANSPORT:

***Boards must be transported and stored under conditions preventing their destruction.***

***Store the product in the original packages in dry rooms – protect it against damage, water and sunshine action.***

### Delivery

Polyurethane boards are supplied in dimensions of 600x1000 mm, covered with foil.

### Quality

Quality is continuously monitored in our laboratories. Assessment of product conformity is ensured by TZUS Praha, branch office in Předměřice nad Labem. In production, a production control system is operated and a certified quality management system in conformity with ISO 9001 implemented.

**Validity:** From December 2016

In as much as we have no direct influence on the use and processing of the product, we are not responsible for damage caused by its incorrect use. We reserve the right to make changes resulting from technological progress.