

### Description and usage

Fireproof thermal insulation boards ARCO EPS 80 are made by expanding and compressing the granules of polystyrene flame retardant under controlled conditions of pressure and temperature. It is recommended to be used in external thermo-systems, thermal and sound insulation for civil and industrial construction of new and old buildings under the process of rehabilitation, roofing, interior floors, interior walls, partitions and lofts, ventilated facades.  
Fireproof expanded polystyrene cell can be applied on concrete, brick, lime-cement plaster, porous concrete, OSB or wood.

### Technical characteristics, identification code and marking

According to EN 13163: 2015,

marking label is as follows: **L2-W1-T1-Sb1-P3-CS(10)80-BS115-DS(70.90)1-DS(N)2-WL(T)5-TR150**

#### Identification code:

short term for expanded polystyrene **EPS**  
European standard **EN 13163**  
thickness tolerance ( $\pm 1$  mm) **T<sub>1</sub>**  
length tolerance ( $\pm 2$  mm) **L<sub>2</sub>**  
width tolerance ( $\pm 2$  mm) **W<sub>2</sub>**  
squareness tolerance ( $\pm 2$ mm/1000mm) **S<sub>2</sub>**  
flatness tolerance ( $\pm 5$ mm) **P<sub>5</sub>**

TECHNICAL DATA SHEET	Unit	Value	Method of determination
Name EPS	<b>ARCO EPS 80</b>		
Thermal conductivity standard value	W/mK	0,037	<b>EN 12667</b>
Thermal conductivity calculation value	W/mK	0,040	
Tensile strength	kPa	$\geq 115$	<b>EN 1607</b>
Bending strength	kPa	$\geq 150$	<b>EN 12089</b>
Water absorption trough total immersion	%	$\leq 5\%$	<b>EN 12087</b>
Dimensional stability in specified temperature and moisture condition	%	1%	<b>EN 1604</b>
Dimensional stability in laboratory condition	%	$\leq 2\%$	<b>EN 1603</b>
Thickness	mm	$\pm 1$ mm	<b>EN 823</b>
Length	mm	$\pm 2$ mm	<b>EN 822</b>
Width	mm	$\pm 1$ mm	<b>EN 822</b>
Flatness	mm	$\pm 3$ mm	<b>EN 825</b>
Perpendicularity	mm	$\pm 1$ mm/1000mm	<b>EN 824</b>
Compression strength at 10% deformation (stand.)	KPa	80	<b>EN 826</b>
Reaction to fire classification	B – s3, d0		
Flammability	Euroclass E		

#### Benefits

- ❖ light weight, easily manufactured and handled;
- ❖ good thermal insulation which reduces annual energy demand;
- ❖ good ration thermal resistance vs. cost;
- ❖ good capacity for diffusion: does not allow the water to pass through, but allows passage of water vapors, leaving the wall to breathe;
- ❖ long life, does not decompose under the influence of microorganisms;
- ❖ no food source for pests.

## Packing and cutting

Standard polystyrene plates measure in size **500 x 1000 mm**, and have a thickness ranging from **20-200 mm**.

At request, panels can be manufactured in other sizes.

There is the possibility of cutting *feder-nut* over thicknesses of **80 mm**.

Thickness	m <sup>2</sup> /box	m <sup>3</sup> /box	plates
20 mm	10	0.2	20
30 mm	8	0.24	16
40 mm	6	0.24	12
50 mm	5	0.25	10
60 mm	4	0.24	8

Thickness	m <sup>2</sup> /box	m <sup>3</sup> /box	plates
80 mm	3	0.24	6
100 mm	2.5	0.25	5
120 mm	2	0.24	4
150 mm	1.5	0.225	3
200 mm	1	0.2	2

## Application

The application of expanded polystyrene is done according to regulations approved by the rules of good practice specific to expanded polystyrene thermal insulation.

## Transport and storage

- ❖ store in vented, dry and free from moisture spaces;
- ❖ polystyrene packets must be protected against: direct sunlight (UV), sources of heat and fire, materials that can cause damages (thinners, fuels, paints, hard or sharp materials);
- ❖ when transport and storage ARCO polystyrene panels, avoid stacking on the edge of the product;
- ❖ during transport, handling and storage, it is forbidden to smoke or work with open fire;

## Health safety and environment

- ❖ recyclable product, do not emit fluorides / chlorides;
- ❖ waste reprocessed results are full;
- ❖ not impact on health;
- ❖ odorless, not irritating for skin

## Warranty

The average lifespan for expanded polystyrene applied in situ, is 25 years under the conditions of proper transport and storage, the provisions of the thermal Pot and correct operation.

In order to identify the material in the event of hidden defects of manufacture, to record any complaints, please save and attach the compliance statement datasheet product purchase documents, labeling and packaging.

## Certification and verification

- ❖ ARCO fireproof expanded polystyrene panels meet the requirements of **SR EN 13163:2015**;
- ❖ **AEROQ** certification to satisfy the **SR EN 13163** and **(UE) Regulation no. 305/2011**;
- ❖ **SRAC** certification for Quality Management System according to **ISO 9001**;