Product Data Sheet

FLAME RETARDANT EXPANDABLE POLYSTYRENE EPS 80 GRAPHITE

Description and usage

Fireproof thermal insulation boards ARCO EPS 80 GRAPHITE are made by expanding and compressing the granules of polystyrene flame retardant impregnated with amorphous carbon under controlled conditions of pressure and temperature. It is recommended to be used in thermal and sound insulation for civil and industrial construction of new and old buildings under the process of rehabilitation, interior and partition walls, interior floors, attics, ventilated facades and external thermal insulation composite system. When using ARCO EPS 80 GRAPHITE boards for new buildings, the thermal and sound insulation is 20% better comparing to using white EPS. This results in a greater comfort and less energy expenses.

Fireproof expanded polystyrene boards 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**

TECHNICAL DATA SHEET	Unit	Value	Method of determination
Name EPS	**ARCO EPS 80 GRAPHITE**		
Thermal conductivity standard value	W/mK	0,032	**EN 12667**
Thermal conductivity calculation value	W/mK	0,036	
Tensile strength	kPa	≥150	**EN 1607**
Bending strength	kPa	≥115	**EN 12089**
Water absorption trough total immersion	%	≤5%	**EN 12087**
Dimensional stability in specified temperature and moisture condition	%	1%	**EN 1604**
Dimensional stability in laboratory condition	%	≤2%	**EN 1603**
Thickness	mm	± 1mm	**EN 823**
Length	mm	± 2mm	**EN 822**
Width	mm	± 1mm	**EN 822**
Flatness	mm	± 3mm	**EN 825**
Perpendicularity	mm	± 1mm/1000mm	**EN 824**
Compression strength at 10% deformation (stand.)	KPa	80	**EN 826**
Reaction to fire classification	B – s2, d0		
Flammability	Euroclass E		

Identification code:

short term for expanded polystyrene	**EPS**
European standard	**EN 13163**
thickness tolerance (± 1 mm)	**T_1**
length tolerance (± 2 mm)	**L_2**
width tolerance (± 2 mm)	**W_1**
squareness tolerance (± 1mm/1000mm)	**S_b1**
flatness tolerance (± 5mm)	**P_3**

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

Standard polystyrene boards 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.

Thickness	m^2 /box	m^3 /box	boards
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^2 /box	m^3 /box	boards
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. Thermal isolation system is applied in dry weather conditions, no rain, at a temperature ranging from +5 and 25 C, at a relative humidity of max 75%. Do not apply on: surfaces highly exposed to UV radiations, frozen surfaces, on fogy and cold weather conditions.

When applied on the exterior, the working area must be protected with protective meshes.

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;

Inadequately protected, Arco EPS 80 Graphite boards can deteriorate if exposed at UV radiations or heat sources!

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;**