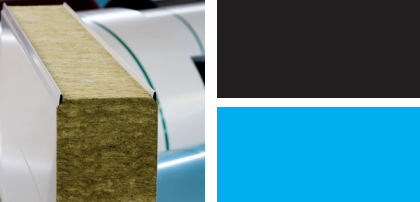


# **Areco Spirit Panel FIRE SAFETY INFO**



Fire Resistant Panel



# Fire Safety Info

## Areco Spirit Panel



## FIRE SAFETY

Areco Spirit Panel is a third party controlled fire safety product which helps you to protect your building against life and property damage. Panels are made from stone wool and covered with steel. The stone wool used in Areco Spirit Panel's core is over 95 % stone, which guarantees the product's excellent fire safety properties. The panel's fire safety is tested with a wide range of different tests before releasing the product. The reached values are declared in the CE-marking and in the Declaration of Prestanda (DoP) document. The most significant values are shown below.

## REACTION TO FIRE

### A2-s1,d0

Product Type	Performance	Nominal Thickness						
		100 mm	120 mm	150 mm	175 mm	200 mm	240 mm	300 mm
ASP-S/S+ (walls)	U-value W/m <sup>2</sup> K	0,38	0,31	0,26	0,22	0,20	0,16	0,13
	Fire resistance	EI 120	EI 120	EI 120	EI 120	EI 120	EI 240	EI 240
ASP-T (walls)	U-value W/m <sup>2</sup> K	0,38	0,31	0,26	0,22	0,20	0,16	0,13
	Fire resistance	EI 120	EI 120	EI 120	EI 120	EI 120	EI 240	EI 240
ASP-L (walls)	U-value W/m <sup>2</sup> K	0,37	0,30	0,24	0,21	0,18	0,15	0,12
	Fire resistance	NPD	NPD	EI 60	EI 60	EI 60	EI 60	EI 60
ASP-E (walls)	U-value W/m <sup>2</sup> K	0,38	0,31	0,26	0,22	0,20	0,16	0,13
	Fire resistance	EI 120	EI 120	EI 120	EI 120	EI 120	EI 240	EI 240
ASP-X (walls)	U-value W/m <sup>2</sup> K	0,43	0,36	0,29	0,25	0,22	0,18	0,14
	Fire resistance	EI 120	EI 120	EI 120	EI 120	EI 120	EI 240	EI 240
ASP-E/-EX (ceiling)	U-value W/m <sup>2</sup> K	0,38/0,43	0,31/0,36	0,26/0,29	0,22/0,25	0,20/0,22	0,16/0,18	0,13/0,14
	Fire resistance	EI 60	EI 60	EI 60	EI 60	EI 60	EI 60	EI 60

## FIRE RESISTANCE

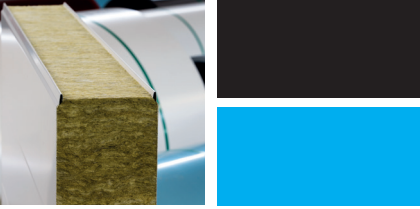
Maximum span of wall-panels used in fire protection purposes is 7.5 m

Maximum span of ceiling-panels used in fire protection purposes is 6 m

## Testing methods and terms explained

### REACTION TO FIRE

Panels are tested according to standard EN13501-1 and the product received A2-s1,d0\* valuation. Acoustic panels are not tested.



# Fire Safety Info

## Areco Spirit Panel



### Marking A2-s1,d0

**Contribution to fire A1, A2, B, C, D, E, F.** Letters represent the product's participation to fire. Products with class A do not participate to fire at any way, products with class F are not able to reach any class, meaning that they escalate fire.

**Smoke production class s1, s2, s3.** Products at class s1 are best, meaning that they do not generate significant amount of smoke. Products at s3 are worst, and they generate lots of smoke which can result in damaged property, reduced visibility and other complications when escaping from fire.

**Discharge of burning droplets d0, d1, d2.** Products at class d0 release no droplets (best). Products at class d2 have no limitation for releasing burning droplets (worst).

## FIRE RESISTANCE

Each panel series are tested separately to ensure their performance, depending on their thickness or core-material type. Tests are performed according to standard EN13501-2. The wall-panels are tested in a burning oven where the temperature is raised according to standard burning curve from 20 degrees (°C) to over 1000 degrees (°C) in a defined time period. The wall-panel is observed to ensure that no place on the panel's surface reaches temperature over 180 degrees (°C) during the declared time.

If wall-panels exceed the declared time range by 35 % in a fire resistance test the manufacturer is allowed to use span extension, but only to a certain limit. All of the Areco Spirit Panels have reached that overtime.

### Marking EI 60

**Integrity E.** Letter E represents the product's ability to resist passage of flames and fire fumes.

**Insulation I.** Letter I represents the product's ability to stand against fire without transfer of heat.

## PANEL USAGE

### **Span and usage of fire safety panels**

Because of reached 35 % over time at the fire resistance test Areco Profiles is allowed to use panel span expansion to maximum length of 7.5 m\*. Panels intended to be used as fire protected walls or roofs must be installed with special Areco Spirit Installation details (marked as Fire Details). These details ensure that both integrity and insulation maintain the declared time.

\*Note that the "Extension standard EN15254" concerning panels has recently changed, so it is no longer possible to use fire protection elements longer than 7.5 m (look at standard table 4 "Extension of tested span length"). This modification covers manufacturers when panel is tested in normal sized burning oven. But the limitation does not cover panels when using them without fire safety purposes.



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**CE** The basis for CE-marking, such as measurement, working methods, and documentation, was carried out by VTT Technical Research Centre in Finland.

Please contact your local sales representative for more information.

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