

Wind Resistance Essays

Essay

According to standard UNE-EN 13659:2004+A1:2009

Definition

It is the capacity of profiles for resisting the specific tests that simulates the wind loads by applying and releasing pressure.

Classification

There are 7 levels of Wind Load resistance with 2 levels of pressure.

“p”: Nominal pressure. It does not produce deformations or damages that can affect to the correct functioning.

“1,5 p”: Security pressure. It does not produce dangerous damages against people (breaking, guides release and so, etc.).

$$\text{Wind load (Pa)} = 1/2 \times r \times v^2$$

Classification			
1 Pa = 1 N/m ²	r = air density = 1,225 kg/m ³	v = air speed m/s	1 m/s = 3,6 km/h

Wind Resistance Levels

The tensions to the wind of rolling shutters, louvers and mallorquinas-classical shutters are evaluated by applying a uniform weight shared over the structure and representing the wind pressure.

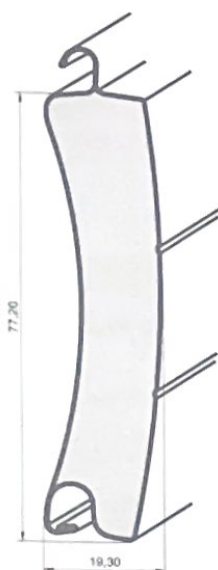
The standard UNE EN 13659:2004+A1:2008 supposes a wind resistance classes.

Class	V-0	V-1	V-2	V-3	V-4	V-5	V-6
Nominal pressure of essay p (Pa) ó (N/m ²)	<50 Pa	50 Pa	70 Pa	100 Pa	170 Pa	270 Pa	400 Pa
Security pressure 1,5 p (Pa) ó (N/m ²)	<75 Pa	75 Pa	100 Pa	150 Pa	250 Pa	400 Pa	600 Pa
Equivalence Km/h	<39	<39,8	<46	<56	<78	<92	<112

The standard UNE EN 13241-1:2003+A1:2011 supposes a wind resistance classes.

Class	P-1	P-2	P-3	P-4	P-5
Load design (Pa)	≤ 300	≤ 450	≤ 700	≤ 1.000	> 1.000
Load test (Pa)	330	495	770	1.100	design load x 1,1
Load calculation (Pa)	450	675	1.050	1.500	design load x 1,5
Breaking load limit (Pa)	≥ 415	≥ 620	≥ 965	≥ 1.375	design load x 1,25
Wind speed limit load break (Km/h)	≈ 93,7	≈ 114,5	≈ 142,9	≈ 170,6	> 170,6

PS-78



CAP PS-78



Technical characteristics

Aluminium thickness	0,48 mm
Nominal thickness	19,30 mm
Area of covering	77,20 mm
Number of slats by meter	12,95 units
Maximum recommended high	5,50 m
Maximum recommended width	5,50 m
Packaging unit standard	6,00 m
Production lengths	from 5,50 to 7,00 m
Minimum rolling diameter	70,00 mm
Weight density 75 kg/m ³	5,08 kg/m ²

Price £ m/l

Code	Description	Packaging	Group I	Group II	Group III	Group IV	Group V
505001	PS-78 blind	15 slats	3,16	3,36	3,46	3,56	-

* Increase of 15% will be apply in to the prices when customized cutting sizes

Price £ m²

Code	Description	Packaging	Group I	Group II	Group III	Group IV	Group V
503060	PS-78 with caps	m ²	80,00	90,00	110,00	-	-

Price £ set

Code	Description	Packaging	Price £ set
505064	Set of cap PS-78	500 set	0,40

Rolling diameter chart

Metallic Spring Locks

	800	1.000	1.200	1.400	1.600	1.800	2.000	2.200	2.400	2.600	2.800	3.000	3.200	3.400
Axle 100	200	220	230	240	260	265	270	280	290	300	305	310	320	330
Axle 220	280	285	290	300	310	320	325	330	340	345	350	360	370	380

* Sizes are in mm

Recommended box according to height

Aluminium box

	250	300	400
Axle 100	2.000	3.100	5.500
Axle 220	-	-	3.900

* Sizes are in mm with box included

Compatibility

End slats:	TER-I, TER-N, TL-77
Aluminium guides:	GE-34/70, GE-36/60, GE-36/80, UPSB 36-100, GE-36/100, GE-76/100, GE-41/150

Fire reaction according to UNE-EN 13501-1:2007+A1:2010

Slats without light slits: Class B-s2, d0

Wind resistance UNE-EN 13659:2004+A1:2008 / Wind resistance UNE-EN 13241-1:2003+A1:2011

