

The EPAQ Quality Label for panels and profiles

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Secretary General, EPAQ

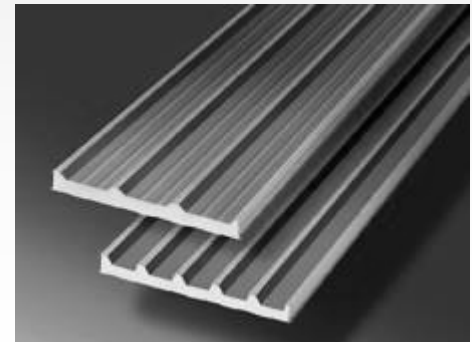
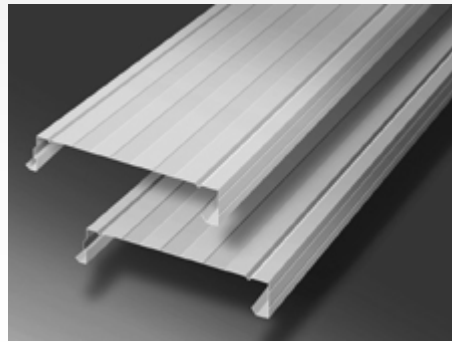
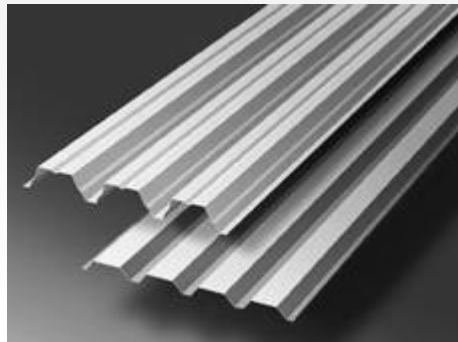
Current situation

New harmonized European standards for

Panels: EN 14509

Profiles: EN 14782 CE-marking mandatory since 2007-11-01

Current situation



Current situation

New harmonized European standards for

Panels: EN 14509

Profiles: EN 14782 CE-marking mandatory since 2007-11-01

Manufacturer

- **I**nitial **T**ype **T**esting
to determine the material characteristics
- **F**actory **P**roduction **C**ontrol

Current situation

CE-Mark
Profiles

CE

AnyCo Ltd, PO Box 21, B-1050

04

EN vvvvv

Self-supporting steel sheet to be used for external roof coverings

Roof profile 45, thickness 0,7 mm, class 1 – length 4 200 mm–
S350GD+Z225 – Side 1: PVDF 25 µm colour RAL 24 / Side 2: AY 25 µm colour RAL 10 – EN 508-1:2000

Reaction to fire: Class A1


External fire performance: Class B_{ROOF} (t1), Class B_{ROOF} (t2) and Class B_{ROOF} (t3)

Resistance to concentrated force: 1,2kN at 2,8m span

Durability: Coating Z225- Side 1 PVDF 25 µm Side 2 AY 25 µm

Current situation

CE-Mark
Panels

 01234	
AnyCo Ltd, PO Box 21, B-1050 XYZ Co 06 01234-CPD-00234	
EN 14509 Metal faced insulating panel for use in buildings. Reference: KS1000. Insulation: PUR Density: 35 kg/m ³ Thickness: 80mm. Facings: Steel 0,5 mm external: 0,4 mm internal (EN 10326). Coating: PVC. Mass: 12 kg/m ² . Use: Roofs	
Thermal transmittance:	0,25 W/m ² K
Mechanical resistance:	
Tensile strength	0,12 MPa
Shear strength	0,10 MPa
Reduced long term shear strength	0,08 MPa
Shear modulus (core)	3,0 MPa
Compressive strength (core)	0,14 MPa
Creep coefficient t = 2000 h	2,0
t = 100000 h	7,0

Bending resistance in the span	
- +ve bending	3,70 kNm/m
- +ve bending, elevated temperature	3,50 kNm/m
- -ve bending	2,90 kNm/m
- -ve bending, elevated temperature	2,75 kNm/m
Bending resistance at an internal support	
- +ve bending	2,60 kNm/m
- +ve bending, elevated temperature	2,50 kNm/m
- -ve bending	3,00 kNm/m
- -ve bending, elevated temperature	2,80 kNm/m
Wrinkling stress (external face)	
- in span	100 MPa
- in span, elevated temperature	95 MPa
- at central support	80 MPa
- at central support elevated temperature	75 MPa
Wrinkling stress (internal face)	
- in span	100 MPa
- at internal support	90 MPa
Reaction to fire: B-s2,d0 (with steel flashing details)	
Fire resistance: F240: F1 15 (load 1,5 kN)	
External fire performance: BROOF or BROOF(x)	
Water permeability: Class C	
Air permeability: 10 m ³ /h/m ²	
Water vapour permeability: Impermeable	
Airborne sound insulation: R _w (C;C _v)	
Durability: Pass – light colours: reflectivity 40-90	

Current situation

Attestation of Conformity Systems



Tasks		Systems					
		1+	1	2+	2	3	4
Manufacturer	Initial Type Testing of the product						
	Testing of samples according prescribed test plan						
	Factory Production Control						
Notified Body	Initial Type Testing of the product						
	Audit-testing of samples taken at the factory, on the market or on the construction site						
	Certification of factory production control on basis of initial inspection						
	Continuous surveillance, assessment and approval of production control						
		Manufacturers Conformity Declaration					
	Certification						

Current situation

Conclusion:

**We have high-standard products
Controlled by the manufacturer only**

Current situation



What quality will enter the European Market?

Current situation

**Producers of panels and profiles
established a voluntary quality system
to ensure an independent control
of the product quality**

Current situation

Attestation of Conformity Systems

Tasks		Systems					
		1+	1	2+	2	3	4
Manufacturer	Initial Type Testing of the product						
	Testing of samples according prescribed test plan						
	Factory Production Control						
Third Party	Initial Type Testing of the product						
	Audit-testing of samples taken at the factory, on the market or on the construction site						
	Certification of factory production control on basis of initial inspection						
	Continuous surveillance, assessment and approval of production control						
		Manufacturers Conformity Declaration					
	Certification						

Current situation

**How EPAQ can reach the goal -
a voluntary private quality system?**

Task of EPAQ

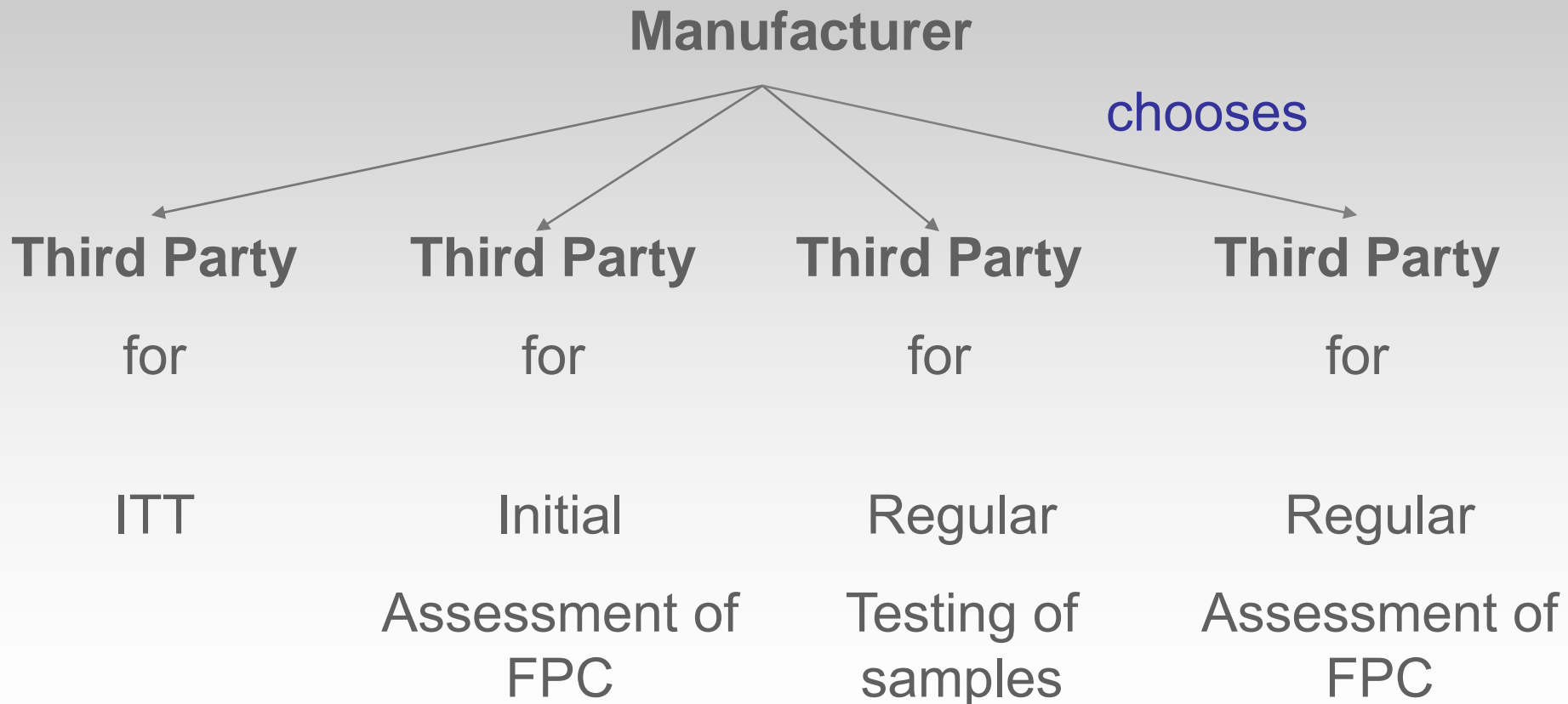
Choice of Third Parties

- Independent laboratories
- Independent expert +
Inexperienced or not impartial laboratory
- Independent laboratories or independent companies for assessment of FPC

Independent Experts

- Individual with recognized knowledge in sandwich / profile technology
- Member of an auditing body (in case of FPC)

Task of the manufacturer

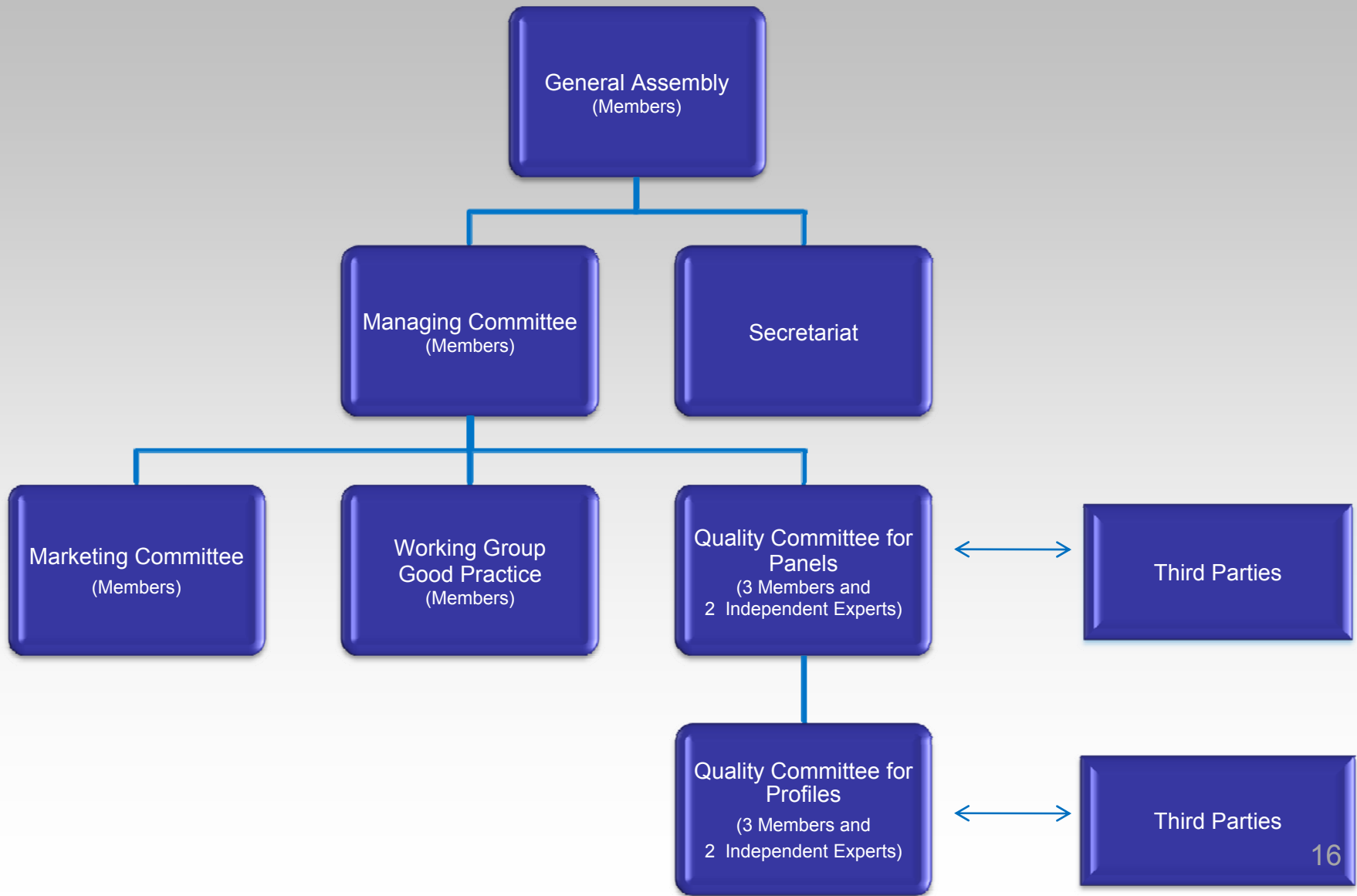


Fundamentals

EPAQ Regulations

- Quality Regulations
- Testing Rules
- Procedural Regulations

For panels and profiles



How to get a Quality Label

- All test have to be done in independent laboratories or in the laboratories of the manufacturer in the presence of an independent expert.
- EPAQ accepts all data of national approvals tested in the same way as described in the standard in combination with reports on external control of the last 2 years that confirms the data of the approvals.

How to get a Quality Label

– γ_M values have to be calculated according to the standard. It is not permitted to take the values of EN 14509.

–When the product changes, the manufacturer has to make new tests for the affected characteristics.

How to get a Quality Label

Report of Initial Type Testing

How to get a Quality Label

Report of Initial Type Testing

Report that includes all basic test results without calculation of statistical evaluation.

How to get a Quality Label

Report of Initial Type Testing



Evaluation Report

Evaluation of ITT

by an independent expert

How to get a Quality Label

Evaluation Report

Report worked out by an independent expert determining basic values and properties as a base for awarding and maintenance of the Quality Label on the basis of the relevant assessment and test reports.

How to get a Quality Label

Report of Initial Type Testing



Evaluation of ITT

Evaluation Report

By an independent expert



Independent expert

Checking of the Evaluation Report

Report (written)



Quality Committee

Decision



Award of the Quality Label

EPAQ Certification Document



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EPAQ Certification Document

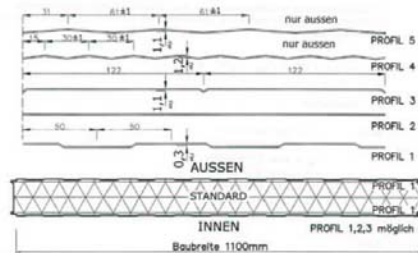
Producer

Panel Type

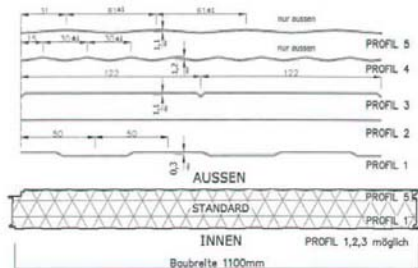
Validity of the EPAQ Quality Label

This EPAQ certification document contains of 5 pages

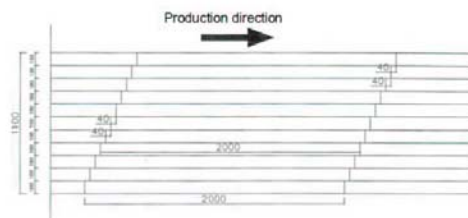
EPAQ Certification Document



Picture 1: cross-section of panel type WP-F



Picture 2: cross-section of panel type FP-F



Picture 3: arrangement of the lamellas

Table 1: requirements for the production control of the core material with faces (mechanical values)

Panel thickness	60 mm	120 mm	200 mm
density of the mineral wool (kg/m ³)	117 ± 10	117 ± 10	117 ± 10
Shear modulus: G _c (N/mm ²)			
mean value	7,6	7,0	5,6
5%-fractile value	5,9	5,6	3,7
Shear strength: f _c (N/mm ²)	0,04	0,03	0,02
Compressive modulus: E _{cc} (N/mm ²)			
mean value	6,0 ¹	8,6 ¹	6,6 ¹
5%-fractile value	2,5	3,7	3,7
Compressive strength: f _{cc} (N/mm ²)	0,05	0,05	0,05
Crosspanel tensile modulus: E _{ct} (N/mm ²)			
mean value	6,0 ¹	8,6 ¹	6,6 ¹
5%-fractile value	5,9	8,5	4,8
Crosspanel tensile strength: f _{ct} (N/mm ²)	0,09	0,09	0,03

¹ The stated values are mean values of compressive and crosspanel tensile modulus:

$$E_c = \frac{E_{cc} + E_{ct}}{2}$$

Table 2: material safety factors γ_M for sandwich panels

Property to which γ _M applies	Limit state	
	Ultimate limit state	Serviceability state
Yielding of a face	1,1	1,0
Wrinkling of a face in the span and at an intermediate support	1,22	1,06
Shear of the core	1,37	1,10
Shear failure of a profiled face	1,1	1,0
Crushing of the core	1,47	1,13
Support reaction capacity of a profiled face	1,1	1,0

EPAQ Quality Certificate

<p>QUALITY CERTIFICATE</p>	
<p>The European Quality Assurance Association for Panels and Profiles awards the right to use the quality label EPAQ Quality to companies which maintain the quality and test requirements in accordance with the Quality Regulations of EPAQ. The award of the quality label is only made, in a given instance, in respect of one specific group of products.</p> <p>EPAQ awards the quality label EPAQ Quality to</p> <p>Best Quality Panel Producer Quality City</p> <p>For the product group</p> <p>Roof Panels PUR R40 - R160</p> <p>The product group is registered under the certification number</p> <p>07-02-01-02-0012</p> <p>Period of validity 2011-10-01</p>	
<p>07-02-01-02-0012</p>	

EPAQ Identification Code

Example: 07- 02- 01- 02- 0012

Country Code

Company Number

Product Group

Product

Certification number

EPAQ Identification Code

Country Codes

Austria	01	Lithuania	15
Belgium	02	Luxembourg	16
Cyprus	03	Malta	17
Czech Republic	04	The Netherlands	18
Denmark	05	Norway	19
Estonia	06	Poland	20
Finland	07	Portugal	21
France	08	Romania	22
Germany	09	Slovakia	23
Greece	10	Slovenia	24
Hungary	11	Spain	25
Iceland	12	Sweden	26
Italy	13	Switzerland	27
Latvia	14	United Kingdom	28

EPAQ Identification Code

Company number:

Number given by EPAQ depending on the number of EPAQ companies in one country.

Product group:

Based on EPAQ Quality Regulations:

01: Panels

02: Profiles

EPAQ Identification Code

Product:

- 01 PUR
- 02 MW**
- 03 EPS
- 04 PF
- 05 CG

- 11 Trapezoidal profile
- 12 Liner Tray
- 13 Cassette
- 14 Sinusoidal
- 15 Tile

Certification number

Serially numbered certificates

EPAQ Education

EPAQ Workshops for member companies

- **Workshops for technicians**
How to use the standards, quality regulations and testing rules
- **Workshops for sales people**
Sense of the quality label

EPAQ Objectives

- **Improving the quality of panels and profiles**
- **Improving the quality of installed products/buildings**
- **Improving of knowledge about the standards, quality regulations, testing rules and all relevant regulations for CE-marking**
- **Explaining the difference between quality labelled products and only CE-marked products to the market**

EPAQ Quality Label

07-02-01-02-0012

