

VTT EXPERT SERVICES OY
PL 1001
02044 VTT
Puh. +358 20 722 4911
Telekopio +358 20 722 7003
www.vttexpertservices.fi



Rakennustuotedirektiivin (89/106/EEC) artiklan 10,
neuvoston direktiivi 21. joulukuuta 1988,
mukaisesti ilmoitettu tuotehyväksyntälaitos

EOTAN JÄSEN

Eurooppalainen tekninen hyväksyntä ETA-10/0178 European Technical Approval

Kaupan nimi:
Trade name

EWONA plyesteri eristeet
EWONA polyester insulations

Hyväksynnän haltija:
Holder of approval:

Insuplast Finland Oy
Liitintie 38
90630 Oulu
Finland

Tuotetyyppi ja sen käyttötarkoitus:
Generic type and use of construction
product:

Rakennusten lämmön- ja ääneneriste
Thermal and acoustic insulation for building

Voimassaoloaika:
Validity from/to

From July 1, 2010 to June 30, 2015

Valmistuspaikka:
Manufacturing plants:

EWONA Oy
Ewonankatu 5
38701 Kankaanpää, Finland

Tämä hyväksyntä sisältää
This European Technical Approval
contains
sivuja/liitteitä
pages/annexes

7 sivua, ei liitteitä
7 pages including no annexes



Eurooppalainen tekninen hyväksyntäorganisaatio
European Organisation for Technical Approvals

I LEGAL BASES AND GENERAL CONDITIONS

1. This European Technical Approval is issued by the VTT Expert Services Oy in accordance with:
 - Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of Member States relating to construction products¹, modified by the Council Directive 93/68/EEC² and Regulation (EC) N° 1882/2003 of the European Parliament and of the Council³,
 - Laki rakennustuotteiden hyväksynnästä (230/2003) luvut 3 ja 10, Ympäristöministeriön asetus rakennustuotteiden hyväksynnästä 3 § sekä Ympäristöministeriön 18.12.2009 antama valtuutuspäätös (19/629/2009),
 - Common Procedural Rules for Requesting, Preparing and the Granting of European Technical Approvals set out in the Annex of Commission Decision 94/23/EC⁴;
 - CUAP for European Technical Approval of "Polyester fibre thermal insulation", edition September 2007.
2. VTT Expert Services Oy is authorised to check whether the provisions of this European Technical Approval are met. Checking may take place in the manufacturing plant(s). Nevertheless, the responsibility for the conformity of the products to the European Technical Approval and for their fitness for the intended use remains with the holder of the European Technical Approval.
3. This European Technical Approval is not to be transferred to manufacturers or agents of manufacturer other than those indicated on Annex 1; or manufacturing plants other than those indicated on page 1 of this European Technical Approval.
4. This European Technical Approval may be withdrawn by the VTT Expert Services Oy pursuant to Article 5 (1) of the Council Directive 89/106/EEC.
5. Reproduction of this European Technical Approval including transmission by electronic means shall be in full. However, partial reproduction can be made with the written consent of the VTT Expert Services Oy. In this case partial reproduction has to be designated as such. Texts and drawings of advertising brochures shall not contradict or misuse the European Technical Approval.
6. The European Technical Approval is issued by VTT Expert Services Oy in English. This version corresponds to the version circulated within EOTA. Translations into other languages have to be designated as such.

¹ Official Journal of the European Communities N° L 40, 11.2.1989, p. 12

² Official Journal of the European Communities N° L 220, 30.8.1993, p. 1

³ official Journal of the European Union N° L 284, 31.10.2003, p. 25

⁴ Official Journal of European Communities N° L 17, 20.1.1994, p. 34

II SPECIFIC CONDITIONS OF THE EUROPEAN TECHNICAL APPROVAL

1. Definition of the product and intended use

1.1 Definition of the construction product

EWONA polyester fibre thermal and acoustic insulations, Well5, Silon4 and Well3 consist of polyester fibres of which part is made of recycled polyester. Insulation is delivered as boards. One side of the insulation board is normally coated with non-woven polypropylene (60 g/m²) or polyester (70 g/m²) facing.

Standard dimensions of the boards are 1180 mm x 560 mm. Special dimensions can be delivered on request. Length and width tolerances are ± 5 mm. Thickness of the insulation is 50 mm ± 5 mm. Density of the insulation is 20-25 kg/m³.

The use of flame retardants or biocides in the product is not covered by this ETA.

1.2 Intended use

The product is intended to be used as thermal and acoustic insulation in walls, partitions, floors, intermediate floors and ceilings. Insulation can also be used as thermal and acoustic insulation of ventilation ducts when there are not requirements for fire resistance. The acoustic performance is not determined.

The insulation is used in constructions where it is not exposed to wetting, weathering, heavy moisture transport, condensation or compression loads.

The provisions made in this ETA are based on an assumed working life of the thermal insulation of 50 years provided that the conditions laid down in this section and sections 4.2/5.1/5.2 for the packaging, transport, storage, installation, use maintenance and repair are met. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

2. Characteristics of product and methods of verification

The methods of verification and characteristics of the insulation evaluated in this ETA are as follows:

CUAP Paragraph	Characteristic	Assessment of the characteristic		
	ER1 Mechanical resistance and stability			
2.4.1	Corrosion developing capacity on metal constructions	No perforations on zinc or copper sheets		
	ER2 Safety in case of fire			
2.4.2	Reaction to fire	Well5	Silon4	Well3
	- Mechanically fixed on non combustible wall with ≥ 50 mm air gap behind substrate and as coated with PP or polyester non-woven facing with horizontal and vertical joints	B-s1,d0	B-s1,d0	B-s1,d0
	- As non coated (not tested)	F	F	F
	ER 3 Hygiene, health and environment			
2.4.3	Content and/or release of dangerous substances	No dangerous substances *) Manufacturer has submitted a written declaration that the product contains no flame retardants, biocides or other dangerous substances.		
2.4.4	Water absorption, EN 1609	0,7 kg/m ²		
2.4.5	Water vapour permeability, EN 12086 μ -value	NPD		
2.4.6	Air permeability, EN 29053	Well5 365 m ³ /msPa	Silon4 350 m ³ /msPa	Well3 195 m ³ /msPa
2.4.7	Susceptibility to mould growth, CUAP Annex B	0 (no mould growth apparent under microscope)		
	ER 4 Safety in use	Not relevant		
2.4.8	ER 5 Protection against noise	NPD		
	ER 6 Energy economy and heat retention			
2.4.8	Thermal conductivity, $\lambda_{\text{DECLARED, (10 °C/dry)}}$ of the products, EN 12667(testing) and EN ISO 10456 (calculation),	Well5 0,041 W/mK	Silon4 0,040 W/mK	Well3 0,038 W/mK
	Thermal conductivity $\lambda_{\text{DECLARED, (10 °)}}$ with a moisture content at 50%RH/23°C	0,041 W/mK	0,040 W/mK	0,038 W/mK
2.4.9	Compressive strength at 10 % deformation, EN 826	NPD		
2.4.10	Tensile strength parallel to faces, EN 1608	Alt types ≥ 20 kPa		
2.4.11	Delamination strength, EN 1607	NPD		
2.4.12	Dimensional stability (length/width/thickness), EN 1604 (23 °C/90 RH,48 h)	+3,5/-0,3/+29		
	Related aspects of serviceability			
	Durability	Included in the previous properties		

*In addition of the specific clauses relating to dangerous substances contained in this European Technical Approval, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products directive, these requirements need also to be compiled with, when and where they apply.

3. Evaluation and attestation of conformity and CE marking

3.1 System of attestation of conformity

According to the decision 99/91/EC of 25.01.1999 of the European Commission the system 3 of attestation of conformity applies, since there is no improvement of the reaction to fire classification in the production process.

This system of attestation of conformity is defined as follows:

System 3: declaration of conformity of the product by the manufacturer on the basis of:

(a) Tasks for the manufacturer:

(1) Factory production control,

(2) Testing of samples taken at the factory in accordance with the prescribed test

plan

(b) Tasks for the notified body:

(3) Initial type testing of the product

3.2 Responsibilities

3.2.1 Tasks for the manufacturer

3.2.1.1 Factory production control

The manufacturer shall have permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures, including records of results. This production control system shall ensure that the product is in conformity with this European technical approval.

The manufacturer may only use initial materials stated in the technical documentation of this European technical approval.

The factory production control shall be in accordance with the control plan of 01.07.2010 relating to the European Technical approval ETA -10/0178 issued on 01.07.2010 which is part of the technical documentation of this European technical approval. The control plan is laid down in the context of the factory production control system operated by the manufacturer and deposited with VTT Expert Services Oy⁵.

The results of factory production control shall be recorded and evaluated in accordance with the provisions of the "Control plan".

3.2.1.2 Other tasks of the manufacturer

The manufacturer shall involve a body which is notified for the tasks referred to in section 3.1 in the field of insulating materials to undertake the actions laid down in section 3.2.2. For this purpose, the control plan referred to in sections 3.2.1.1 and 3.2.2 shall be handed over by the manufacturer to the approved body involved.

The manufacturer shall make a declaration of conformity, stating that the construction products are in conformity with the provisions of the European technical approval ETA-10/0178 issued on 01.07.2010.

3.2.2 Tasks of approved bodies

The approved body shall perform the initial type testing of the product in accordance with the provisions laid down in control plan.

For initial type testing the results of the tests performed as part of the assessment for this European Technical Approval shall be used provided nothing changes in the production or factory. Otherwise the necessary type testing shall be agreed between VTT Expert Services Oy and approved bodies involved.

The approved body shall retain the essential points of its actions referred to above and state the results obtained and conclusions drawn in a written report.

3.3 CE-marking

The CE-marking shall be affixed on each packaging or on the delivery tickets put into the packages. The symbol "CE" shall be accompanied by the following additional information:

- Name of the product: Commercial trade name as indicated in this ETA
- Name and address of the ETA holder (legal entity responsible for the manufacture)
- The last two digits of the year in which the CE marking was affixed
- The number of the European Technical Approval, ETA-10/0178
- Declared and most essential properties according to paragraph 2 of this ETA

4. Assumptions under which the fitness of the product for the intended use was favourably assessed

4.1 Manufacturing

Manufacturing of the polyester fibre thermal and acoustic insulation is based on the defined production method, use of defined raw materials and tolerances. If changes take place manufacturer is responsible to clarify if the change has influence on the properties of the product tested according to the provisions of this ETA.

The European technical approval is issued for the product on the basis of agreed data/information, deposited with VTT Expert Services Oy, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to VTT Expert Services Oy before the changes are introduced. VTT Expert Services Oy will decide whether or not such changes affect the approval and consequently the validity of the CE marking on the basis of the approval and if so whether further assessment or alterations to the approval shall be necessary.

4.2 Installation

The insulation is installed on to the building according to the instructions of the manufacturer. The suitability of the insulation to the planned purpose shall be evaluated taking into account what has been said in chapter 1.2.

5. Indications to the manufacturer

5.1 Packaging transport and storage

The insulation products are transported to the building site in truck containers. The products shall be stored protected from rain and at temperatures between – 40 and + 80 °C before the installation.

5.2 Use, maintenance and repair

The insulation shall work adequately when the construction where it is installed according to the instructions of the manufacturer is maintained and repaired so that the provisions of use given in chapter 1.2 of this ETA are fulfilled.

On behalf of VTT Expert Services Oy

Espoo July 1, 2010



Liisa Rautiainen
Assessment Manager



Lina Markelin-Rantala
Senior Research Scientist