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European Technical Assessment

ETA 15/0126
of 07/04/2015

General Part

Technical Assessment Body issuing the ETA	SP Sveriges Tekniska Forskningsinstitut
Trade name of the construction product	Groundshield
Product family to which the construction product belongs	Substructure kits for heated buildings
Manufacturer	Advanced Foundation Technology Ltd Dinting Vale, Business Park Glossop Derbyshire SK13 6LG, UK www.advancedfoundationtechnologylimited.co.uk
Manufacturing plant(s)	LC Värmegrund AB Veneröd 580 442 95 Håлта, Sweden
This European Technical Assessment contains	4 pages including 1 Annex which form an integral part of this assessment.
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of	European Assessment Document 340025-00-0403, edition 02-2015.

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1 Technical description of the product

Groundshield Substructure kit for heated buildings is a kit for foundations which are consisting of the following components:

- Prefabricated insulated edge elements according to ETA 15/0139.
- Ground insulation made of EPS according to EN 13163.
- Reinforced concrete floor slab according to design calculations.
- Floor heating conduits (when applicable).

Concrete and reinforcing steel bars will be locally supplied. Dimensions and classes will be specified in the design documentation for each individual work.

2 Specification of the intended use(s) in accordance with the applicable European Assessment Document (hereinafter EAD)

Substructure kit for heated buildings, with or without integrated floor heating system.

The intended use for the kits is mainly residential buildings. The building kits may also be used for other applications when the performance requirements are about the same as for residential houses.

The provisions made in this European Technical Approval are based on an assumed working life of the substructure kit for heated buildings of 50 years. 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.

3 Performance of the product and references to the methods used for its assessment

3.1 Essential characteristics and their performance

		Characteristic	Performance
BWR 1	Mechanical resistance and stability	Structural capacities	Clause 3.1.1
BWR 2	Safety in case of fire	Reaction to fire	See Annex 1
BWR 6	Energy economy and heat retention	Thermal resistance	Clause 3.1.2
	General aspects	Aspects of durability	Clause 3.1.3.1
		Deformations	Clause 3.1.3.2
		Damages due to frost	Clause 3.1.3.3

3.1.1 BWR 1 Mechanical resistance and stability

The design calculations are made case by case by the manufacturer according to the order for the works (Method 3b).

3.1.2 BWR 6 Energy economy and heat retention

The UC-values for the kit will be calculated according to EN ISO 6946.

The calculations will be made case by case according to the order for the works.

3.1.3 General aspects

3.1.3.1 Aspects of durability

The assumed working life of the kit in the ETA is based on declarations from the manufacturers of the included materials.

3.1.3.2 Deformations

Will be included in the design calculations made case by case.

3.1.3.3 Damage due to frost

The frost resistance of the insulated edge elements are verified.

The evaluation of frost resistance for the complete foundation kit will be made case by case according to ISO 13793.

4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base

For the assessment and verification of constancy of performance system 2+ applies.

Product(s)	Intended use(s)	Level(s) or class(es)	System(s)
Substructure kit for heated buildings	All	-	2+

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at SP Sveriges Tekniska Forskningsinstitut.

Issued in Borås on 07.04.2015
By SP Sveriges Tekniska Forskningsinstitut

Lennart Månsson
Certification Manager

Annex 1 - DESCRIPTION OF PRODUCT

Groundshield Substructure kit for heated buildings is a kit for foundations which are consisting of the following components:

- Prefabricated insulated edge elements according to ETA 15/0139.
- Ground insulation made of EPS according to EN 13163.
Classes for thermal resistance and compressive strength will be chosen according to the design documentation for each individual work. Reaction to fire, Class F.
- Reinforced concrete floor slab according to design calculations.
- Floor heating conduits (when applicable).

Sample of drawings

