Deutsches Institut für Bautechnik

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European Technical Assessment Body for construction products

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European Technical Assessment ETA-25/0305 of 27 February 2026

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	Grouting cement CEM I 42.5 R (ep) th-rheoment
Product family to which the construction product belongs	16 - reinforcing and prestressing steel for concrete (and ancillaries) + post tensioning kits - special filling products for post tensioning kits
Manufacturer	thomas zement GmbH & Co. KG Werk Dornburg In der Oberaue 07774 Dornburg-Camburg
Manufacturing plant	thomas zement GmbH & Co. KG Werk Dornburg In der Oberaue 07774 Dornburg-Camburg GERMANY
This European Technical Assessment contains	5 pages
This European Technical Assessment is issued in accordance with Article 95(4) of Regulation (EU) No 2024/3110, on the basis of	EAD 160027-00-0301
This version replaces	ETA-25/0305 issued on 12 August 2025

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Specific part

1 Technical description of the product

The grouting cement CEM I 42,5 R (ep) "th-rheoment" referred to in this document is to be used to produce cementitious grout complying with EN 447 for post-tensioning kits according to EAD 160027-00-0301 "Special filling products for post-tensioning kits".

Cementitious grouts play a major role to protect tensile elements from corrosion. They are consequently one of the main factors for the durability of the structure and have to be applied diligently by qualified and experienced personnel to ensure the quality of filling.

Some of the tests are done with strands (for example, to control wick induced bleeding in the case of cementitious grout). That does not mean that the product is only valid for strands but that strands provide the most severe conditions for the testing setup. Hence, it is also valid for other tensile elements such as bars or wires.

The grouting cement CEM I 42,5 R (ep) "th-rheoment" is delivered in silo lorries or as bagged goods. Concerning product packaging, transport, storage, maintenance, replacement and repair it is the responsibility of the manufacturer to undertake the appropriate measures and to advise his clients on the transport, storage, maintenance, replacement and repair of the product as he considers necessary.

It is assumed that the product will be installed according to the manufacturer's instructions or (in absence of such instructions) according to the usual practise of the building professionals.

Manufacturer's instructions should give guidance on:

- Mixing and filling equipment (the manufacturer has to provide guidance about the kind of mixer which has to be used on site)
- Transport, storage and handling
- Duct filling (measurement and recording)

2 Specification of the intended use in accordance with the applicable European Assessment Document

The grouting cement CEM I 42,5 R (ep) "th-rheoment" is to be used with post-tensioning kits (see EAD 160027-00-0301). Cementitious grout made with grouting cement CEM I 42,5 R (ep) "rheoment" is used for internal bonded tendon or external tendon when filled directly around bare strands inside ducts. It is used for internal or external unbonded tendons when filled around monostrands inside ducts.

The verification and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of cementitious grout incorporating the grouting cement CEM I 42,5 R (ep) "th-rheoment" of at least 100 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 Mechanical resistance and stability (BWR 1)

Essential characteristic	Method	Performance		
		5 °C	20 °C	35 °C
Sieve test	EN 445:2008; 4.2	No lumps detected.		
Fluidity	EN 445:2008; 4.3.1 Cone method	t_0 = 15,5 s t_{30} = 12,5 s	t_0 = 13,5 s t_{30} = 13,0 s	t_0 = 17,0 s t_{30} = 17,0 s
	EN 445:2008; 4.3.2 Grout spread method	No performance assessed.		
Bleeding	EN 445:2008; 4.5 Wick induced	$\Delta V_W \leq 0{,}01$ %	$\Delta V_W \leq 0{,}1$ %	$\Delta V_W \leq 0{,}01$ %
	EN 445;2008; 4.4 Inclined tube	-	$\Delta V_W \leq 0{,}01$ %[1] $\Delta V_W \leq 0{,}07$ %[2]	-
Volume change	EN 445:2008; 4.5 Wick induced	ΔV = + 0,02 %	ΔV = + 0,2 %	ΔV = + 0,02 %
Compressive strength	EN 445:2008; 4.6	$R_{C,28d}$ = 82,2 MPa	$R_{C,28d}$ = 77,9 MPa	$R_{C,28d}$ = 70,0 MPa
Setting time	EN 196-3:2016; 6	No performance assessed.		
Density	EN 445:2008; 4.7	-	ρ = 2000 kg/m³	-
Sedimentation property	EAD 160027-00-0301, Annex A	No performance assessed.		

[1] with re-grouting
[2] without re-grouting

3.2 Reaction to fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Performance class A1[1]

3.3 Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Release of SVOC and VOC	No performance assessed.
Release of leachable substances	No performance assessed.

[1] Components made of steel, cast iron, stainless steel, cement or mortar containing mineral binders are considered to satisfy the requirements for performance class A1 of the characteristic reaction to fire, in accordance with the provisions of EC Decision 96/603/EC (as amended) without the need for testing on the basis of it fulfilling the conditions set out in that Decision and its intended use being covered by that Decision.

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

For the products covered by EAD 160027-00-0301 the applicable European legal act is: Decision 98/456/EC of 3rd July 1998 on the procedure for attesting the conformity of construction products pursuant to Article 20(2) of Council Directive 89/106/EEC as regards post-tensioning kits for the prestressing of structures, Official Journal of the European Communities L 201 from 17th July 1998, page 112.

The system to be applied is: 1+

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 with Deutsches Institut für Bautechnik.

Issued in Berlin on 27 February 2026 by Deutsches Institut für Bautechnik

Petra Schröder
Head of Section

beglaubigt:
Wagner