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European Technical Assessment

**ETA 20/0848
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English translation prepared by IETcc. Original version in Spanish language

General Part

Technical Assessment Body issuing the ETA:

Instituto de Ciencias de la Construcción Eduardo Torroja (IETcc - CSIC)

Trade name of the construction product:

INY-ALVIPRE

Filling grout for post-tensioning kits

Product family to which the construction product belongs

Reinforcing and pre-stressing steel for concrete and ancillaries, post-tensioning kits

Manufacturer:

ALVIPRE FACTORY S.L.

Parcela 64, Polígono Industrial La Armentera,
Monzón (Huesca, Spain)

<https://alvipre.es/>

Manufacturing plant(s):

ALVIPRE FACTORY S.L.

Parcela 64, Polígono Industrial La Armentera,
Monzón (Huesca, Spain)

This European Technical Assessment contains

6 pages

This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of

European Assessment Document (EAD)
160027-00-0301 Special filling products for
post-tensioning kits

This version replaces:

ETA version 1 issued on 29/10/2021

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Specific parts

1. Technical description of the product

1.1 Grout

INY-ALVIPRE is a filling grout (as defined in EN 447) used as filling material for post-tensioning kits in accordance to EAD 160027-00-0301. This product is intended for injection in ducts containing pre and post-stressed strands to ensure their permanent protection against corrosion and adherence between strands and ducts.

It consists of five ready-to-use components:

- Cement
- Water
- Superplasticizing admixture
- Retarding admixture
- Expanding admixture

The grout is produced using an appropriate on-site mixing process of the above components.

1.2 Installation

Installation should be carried out according to the ETA holder's specifications and using the specific application instructions of the product manufactured by the ETA holder or by suppliers recognized by the ETA holder. Installation should be carried out by appropriately qualified staff and under the supervision of the technical responsible of the site. The minimum equipment needed shall be mixer, containers and holding tanks.

The manufacturer agrees to provide, upon request, information relating to specific conditions of implementation, and in regards to hygiene and safe handling of the product.

The product operates in a range of temperature between 5 and 34 °C. In case of temperature over the range, cooling the water. In case of temperature under the range, heating the water.

The components are added to the mixer model Bomba sinfin S5+SP5 Putzmeister Mörtelmaschinen MM 3319-3 E and then mixed between 10 and 14 minutes. The fluidity test is suitable as checking procedure to ensure that the production conditions are satisfactory.

2. Specification of the intended use in accordance with the applicable EAD.

2.1 Intended use

INY-ALVIPRE special grout is intended to fill remaining void within ducts containing prestresses strands to ensure their permanent protection against corrosion and adherence between strands and ducts.

INY-ALVIPRE is used as special grout for Post-Tensioning kits according to EAD 160027-00-0301.

2.2 Working life/Durability

The assessment methods included or referred to in EAD 160027-00-0301 allow to ensure a working life of INY-ALVIPRE above 100 years. These provisions are based on the current state of art and on the knowledge and experience currently available.

The provisions made in this European Technical Assessment are based on an assumed intended working life of 100 years for Post-Tensioning Systems. To ensure this working life special attention shall be paid in regard to the installation, appropriate use, maintenance and repair. The indications given as to the working life of the construction product cannot be interpreted as a guarantee neither given by the product manufacturer or his representative nor EOTA when drafting this EAD nor by the Technical Assessment Body issuing this ETA based on the cited EAD, but are regarded only as a means for expressing the expected economically reasonable working life of the product.

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

3.1 Essential characteristics of the product

This European Technical Assessment for the product INY-ALVIPRE is issued on the basis of relevant data, that have been deposited at IETcc, and identification of the product that has been assessed and judged.

The assessment of the performance of the product INY-ALVIPRE described in this document has been made in concordance with the EAD 160027-00-0301, Special Filling Products for Post-Tensioning Kits.

3.1.1 Mechanical resistance and stability (BWR 1)

Table 1. Basic Work Requirements 1: Mechanical resistance and stability

Essential characteristic		Assessment method	Performance (level, class or description)
27	Grout: General properties	Fluidity test (EN 445:2007)	$t_0 < 25$ s (EN 447:2007)
			$t_0 < 25$ s & $0.8 t_0 < t_{30} < 1.2 t_0$ (EN 447:2007)
		Bleeding test (EN 445:2007)	< 0.3 % at 3 h (EN 447:2007)
		Inclined tube (EN 445:2007)	< 0.3 % at 3 h (EN 447:2007)
		Volume change (EN 445:2007)	$-1\% < \Delta V < 5\%$ at 24 h (EN 447:2007)
		Compressive strength test (EN 445:2007)	At 7 days $\sigma_c > 27$ MPa (EN 447:2007)
			At 28 days $\sigma_c > 30$ MPa (EN 447:2007)
		Setting time test (EN 196-3:2016)	Start > 3 h (EN 447:2007)
			End < 24 h (EN 447:2007)
		Sieve test (EN 445:2007)	Without granule (EN 447:2007)
Density test (EN 445:2007)	$1700 < \rho < 1900$ kg/m ³		
Chloride content test (EN 480-10:2009)	$Cl^- < 0.10$ % (EN 447:2007)		

Essential characteristic		Assessment method	Performance (level, class or description)
28	Grout: Sedimentation property	Sedimentation test EAD 160027-00-0301 Annex A	No Performance Determined

3.1.2 Safety in case of fire (BWR 2)

Table 2. Basic Work Requirements 2: Safety in case of fire

Essential characteristic		Assessment method	Performance (level, class or description)
29	Reaction to fire	EAD 160027-00-0301 clause 2.2.29	Class A1

3.1.3 Hygiene, health and environment (BWR 3)

Table 3. Basic Work Requirements 3: Hygiene, health and environment

Essential characteristic		Assessment method	Performance (level, class or description)
30	Content, emission and/or release of dangerous substances	EAD 160027-00-0301 clause 2.2.30	The product neither releases nor emits dangerous substances

The manufacturer agrees to provide, upon request, information relating to hygiene and safe handling of the product.

The assessment for the intended use was carried out according to the Basic Work Requirements (BWR). The characteristics of the components shall correspond to the respective values laid down in Tables 1, 2 and 3 of this ETA, checked by IETcc.

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

4.1 System of assessment and verification of constancy of performance

According to the decision 98/456/EC of the European Commission¹, system 1+ of assessment and verification of constancy of performance (see EC delegated regulation (EU) No 568/2014 amending Annex V to Regulation (EU) N° 305/2011) applies.

¹ Published in the Official Journal of the European Union (OJEU) L201 of 17 of July of 1998, page 112.
See www.new.eur-lex.europa.eu/oj/direct-access.html

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 which is deposited at IETcc².

For type testing, the results of the tests performed as part of the assessment for the European Technical Assessment shall be used unless there are changes in the production line or plant. In such cases, the necessary type testing has to be agreed between IETcc and the notified body.

Issued in Madrid on 10th of May 2022

By



Director

on behalf of Instituto de Ciencias de la Construcción Eduardo Torroja (IETcc – CSIC)

² The Control Plan is a confidential part of the ETA and only handed over to the notified certification body involved in the assessment and verification of constancy of performance.