



EUROPEAN ASSESSMENT DOCUMENT

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MINERAL NON-FLEXIBLE SEALING SLURRY KIT ON THE BASIS OF CEMENT

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This European Assessment Document (EAD) has been developed taking into account up-to-date technical and scientific knowledge at the time of issue and is published in accordance with the relevant provisions of Regulation (EU) No 305/2011 as a basis for the preparation and issuing of European Technical Assessments (ETA).

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1 SCOPE OF THE EAD

1.1 Description of the construction product

The construction product is a liquid applied non-flexible mineral sealing slurry kit on the basis of cement referred as mineral sealing slurry with additional components which should part of the kit:

- Primer
- Reinforcement
- Sealing details (e.g. sealing tape, floor- and wall sleeves, corners)

The components which are part of the kit shall be described in the ETA.

The product is not covered by a harmonised European standard (hEN).

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 practice of the building professionals.

Relevant manufacturer's stipulations having influence on the performance of the product covered by this European Assessment Document shall be considered for the determination of the performance and detailed in the ETA.

1.2 Information on the intended use(s) of the construction product

1.2.1 Intended use(s)

The mineral sealing slurry is used to seal construction parts against soil moisture and pressing water on mineral substrates against the penetration of water.

There are the following use scenarios:

Use scenario a):

- Horizontal waterproofing in and under walls
- Waterproofing of construction parts on the side of water against soil moisture
- Waterproofing of construction parts against pressing water from the inside (water tank, water storage tanks with a water head up to 3 m)

Use scenario b): Negative side water proofing against soil moisture and ground water (water pressure indicated by the manufacturer), usually used as material for reconstruction and repair. This EAD covers kits tested with a maximum test water pressure of 75 kPa (0,75 bar) and an indicated value for the admissible water pressure of 3 m.

1.2.2 Working life/Durability

The assessment methods included or referred to in this EAD have been written based on the manufacturer's request to take into account a working life of the mineral sealing slurry for the intended use of 10 years for use scenario a) and 5 years for use scenario b) when installed in the works (provided that the mineral sealing slurry is subject to appropriate installation (see 1.1)). These provisions are based upon the current state of the art and the available knowledge and experience.

When assessing the product, the intended use as foreseen by the manufacturer shall be taken into account. The real working life may be, in normal use conditions, considerably longer without major degradation affecting the basic requirements for works¹.

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 by EOTA when drafting this EAD nor by the Technical Assessment Body issuing an ETA based on this EAD, but are regarded only as a means for expressing the expected economically reasonable working life of the product.

1.3 Specific terms used in this EAD

1.3.1 Negative side water proofing

The sealing slurry is installed on the far side of the construction element (e.g. wall), so the construction element is soaked, but no water penetrates into the dry side of the construction element.

1.3.2 Standard climate

Standard climate in accordance with this EAD shall be defined by 23 °C and 50 % relative humidity, class 2 according to EN ISO 291. Different climates are indicated in the following.

¹ The real working life of a product incorporated in a specific works depends on the environmental conditions to which that works is subject, as well as on the particular conditions of the design, execution, use and maintenance of that works. Therefore, it cannot be excluded that in certain cases the real working life of the product may also be shorter than the working life referred to above.

2 ESSENTIAL CHARACTERISTICS AND RELEVANT ASSESSMENT METHODS AND CRITERIA

2.1 Essential characteristics of the product

Table 1 shows how the performance of the mineral sealing slurry kit is assessed in relation to the essential characteristics.

Table 1 Essential characteristics of the kit and methods and criteria for assessing the performance of the product in relation to those essential characteristics

No	Essential characteristic	Assessment method	Type of expression of product performance <i>(level, class, description)</i>
Basic Works Requirement 2: Safety in case of fire			
1	Reaction to fire	2.2.1.1	Class
Basic Works Requirement 3: Hygiene, health and the environment			
2	Content, emission and/or release of dangerous substances	2.2.1.2	Level, Description
3	Watertightness / Penetration of water	2.2.1.3	Pass
4	Watertightness in end use conditions for use category a) and around penetrations (if any).	2.2.1.4	Level
5	Watertightness in end use conditions for use scenario b)	2.2.1.5	Level
6	Water vapour permeability	2.2.1.6	Level
7	Bond strength	2.2.1.7	Level
8	Resistance to clear water	2.2.1.8	Description
9	Resistance to freeze/thaw	2.2.1.9	Description
10	Sliding during installation	2.2.1.10	Pass

Table 1a shows how the performance of the component "mineral sealing slurry" is assessed in relation to the essential characteristics.

Table 1a Essential characteristics of the component mineral sealing slurry and methods and criteria for assessing the performance of the product in relation to those essential characteristics

No	Essential characteristic	Assessment method	Type of expression of product performance <i>(level, class, description)</i>
Basic Works Requirement 3: Hygiene, health and the environment			
1	Material	2.2.2.1	Level, Description
2	Shrinkage	2.2.2.2	Level
3	Thickness, Thickness after drying	2.2.2.3	Level

Table 1b shows how the performance of the component "primer" is assessed in relation to the essential characteristics.

Table 1b Essential characteristics of the component Primer and methods and criteria for assessing the performance of the product in relation to those essential characteristics

No	Essential characteristic	Assessment method	Type of expression of product performance <i>(level, class, description)</i>
Basic Works Requirement 3: Hygiene, health and the environment			
1	Material	2.2.3.1	Description

Table 1c shows how the performance of the component "sealing details" is assessed in relation to the essential characteristics.

Table 1c Essential characteristics of the component sealing details and methods and criteria for assessing the performance of the product in relation to those essential characteristics

No	Essential characteristic	Assessment method	Type of expression of product performance <i>(level, class, description)</i>
Basic Works Requirement 3: Hygiene, health and the environment			
1	Material	2.2.4.1	Description
2	Dimensions	2.2.4.2	Level
3	Resistance to alkalinity	2.2.4.3	Description

2.2 Methods and criteria for assessing the performance of the product in relation to essential characteristics of the product

This EAD contains provisions on how to express certain performance characteristics. These provisions only apply if the manufacturer wishes to declare a performance for the relevant product characteristic.

2.2.1 Methods and criteria for assessing the performance of the product in relation to essential characteristics of the assembled product

2.2.1.1 Reaction to fire

The sealing slurry kit shall be tested using the test method(s) according to EN 13501-1 and relevant for the corresponding reaction to fire class. The sealing slurry kit shall be classified according to Commission Delegated Regulation (EU) No 2016/364 in connection with EN 13501-1.

2.2.1.2 Content, emission and/or release of dangerous substances

The performance of the product related to the emissions and/or release and, where appropriate, the content of dangerous substances will be assessed on the basis of the information provided by the manufacturer² after identifying the release scenarios (in accordance with EOTA TR 034) taking into account the intended use of the product and the Member States where the manufacturer intends his product to be made available on the market.

The identified intended release scenarios for this product and intended use with respect to dangerous substances are:

IA1: Product with direct contact on indoor air (use scenario b)

IA 2: Product with indirect contact to indoor air (e.g covered products) but possible impact on indoor air.

S/W1: Product with direct contact on soil-, ground- and surface water

2.2.1.2.1 Leachable substances

For the intended use covered by the release scenario S/W1 the performance of the product concerning leachable substances has to be assessed. A leaching test with subsequent eluate analysis must take place, each in duplicate.

If the product contains a substance toxic for reproduction and/or substances that are labelled "Aquatic Acute 1" or "Aquatic Chronic 1,2,3,4" in accordance with Regulation (EC) No 1272/2008, the risk of these substances to the environment is assessed based on a leaching test with subsequent eluate analysis, each in duplicate.

The eluate is produced by a tank test according to CEN/TS 16637-2. The test sample is a set of 6 sandblasted glass plates coated with the product (thickness according to the one measured in section 2.2.10). Preconditioning is 28 d at room temperature. The leachant shall be pH-neutral demineralised water and the ratio of liquid volume to surface area must be 20-25 l/m².

² The manufacturer may be asked to provide to the TAB the REACH related information which he must accompany the DoP with (cf. Article 6(5) of Regulation (EU) No 305/2011).

The manufacturer is **not** obliged:

- to provide the chemical constitution and composition of the product (or of constituents of the product) to the TAB, or
- to provide a written declaration to the TAB stating whether the product (or constituents of the product) contain(s) substances which are classified as dangerous according to Directive 67/548/EEC and Regulation (EC) No 1272/2008 and listed in the "Indicative list on dangerous substances" of the SGDS.

Any information provided by the manufacturer regarding the chemical composition of the products may not be distributed to EOTA or to TABs.

The eluates taken after 6 hours / 1 day / 2 days and 6 hours / 4 days / 9 days / 16 days / 36 days / 64 days shall be analysed for all environmentally relevant parameters, presumably at least the following:

- arsenic, lead, cadmium, chromium (total), copper, nickel, zinc
- sulfate (SO_4^{2-}),
- TOC
- pH-value, electrical conductivity, odour, colour, turbidity, and tendency to produce foam

Analysis of subsequent eluates can be omitted if the concentration of the respective parameter arsenic, lead, cadmium, chromium (total), copper, nickel, zinc or sulfate is lower than the method detection limit.

Flushing of test samples is not allowed when refreshing the eluate.

In eluates of "6 hours" and "64 days", the following biological tests shall be conducted:

- Acute toxicity test with *Daphnia magna* Straus
- toxicity test with algae
- luminiscent bacteria test

For each biological test, EC-values shall be determined for dilution ratios 1:2, 1:4, 1:6, 1:8 and 1:16.

If the parameter TOC is higher than 10 mg/l, the following biological tests shall be conducted with the eluates of "6 hours" and "64 days" eluates.

- biological degradation according to OECD Test Guideline 301 part A, B or E.

All parameters have to be analysed with a standardised test method according to Table 2. Measured values for each parameter of the analysis of the elution test must be expressed in $\mu\text{g/l}$ and $\mu\text{g/m}^2$ respectively. Determined toxicity in biological tests must be expressed as EC_{20} -values for each dilution ratio. Maximum determined biological degradability must be expressed as "% within ...hours/days".

As conclusive assessment the measured values of each parameter have to be stated in the ETA.

Table 2 Relevant parameters for analysis and appropriate standardised test methods

No	Parameter	Test method
1	Arsenic (As)	EN ISO 11969 or EN ISO 11885
2	Lead (Pb)	EN ISO 11885
3	Cadmium (Cd)	EN ISO 5961 or EN ISO 11885
4	Chromium (total) (Cr)	EN 1233 or EN ISO 11885
5	Copper (Cu)	EN ISO 11885
6	Nickel (Ni)	EN ISO 11885
7	Zinc (Zn)	EN ISO 11885
8	Sulfate (SO_4^{2-})	EN ISO 10304-1
9	TOC	EN 1484
10	pH-value	EN ISO 10523
11	electrical conductivity	EN 27888
12	odour	EN 1622
13	colour	EN ISO 7887
14	turbidity	EN ISO 7027
15	tendency to produce foam	To be described
16	daphnia	EN ISO 6341
17	algae	ISO 15799
18	luminescent bacteria	EN ISO 11348-1, EN ISO 11348-2 or EN ISO 11348-3

19	substances labelled "Aquatic Acute 1" or "Aquatic Chronic 1,2,3,4"	If contained in the product appropriate test methods
20	substances toxic for reproduction (repr. 2, repr. 1A and 1B)	If contained in the product appropriate test methods

2.2.1.2.2 SVOC and VOC

For the intended use covered by the release scenarios IA1 and IA2 semi-volatile organic compounds (SVOC) and volatile organic compounds (VOC) are to be determined in accordance with EN 16516 **Error! Reference source not found..**

The respective loading factor [m^2/m^3] used for emission testing can be taken from the following table:

Table 3 Loading factor L, depending on the product type (in accordance with EN 16516)

Intended use	Loading factor [m^2/m^3]
Walls	1,0
Floor, ceiling	0,4

The preparation of the test specimen is performed on an inert substrate (glas or steel), installed in accordance with the manufacturer's product installation instructions (MPII) or (in absence of such instructions) the usual practice of installation. The maximum thickness specified by the manufacturer shall be used.

Once the test specimen has been produced, as described above, it should immediately be placed in the emission test chamber. This time is considered the starting time of the emission test.

The test results have to be reported for the relevant parameters (e.g. chamber size, temperature and relative humidity, air exchange rate, loading factor, size of test specimen, conditioning, production date, arrival date, test period, test result) after 3 and 28 days testing.

The relevant test results shall be expressed in [mg/m^3] and stated in the ETA as defined in EN 16516 (see section 10.6), as far as specified by the client, to express the respective product performance.

2.2.1.3 Watertightness / Penetration of water

The penetration of water shall be tested according to EN 12390-8 for specified pressure and time.

The test substrate shall be prepared according to EN 14891, Art. A.7.

Curing time 24 h

Storing time: 7 d in water, afterwards at least 5 weeks at standard climate

After storing the concrete slabs were coated with or without pre-treatment in accordance with the manufacturer's instructions with the minimum cured thickness and the sequence of the layers and including post-treatment, where applicable.

The test specimens shall be stored 28 days at standard climate.

Waterpressure: The test water pressure is 150 kPa.

Test period: 4 weeks (28 days) holding the test pressure

At the end of the impact of water pressure the test specimen shall be uninstalled from the test rig and directly split in the middle of the slab. The test is passed, if the fractured surface of concrete slab is dry.

The main value of cured thickness of the product shall be measured along the rupture line. The thickness shall be stated in the ETA as minimum cured thickness.

2.2.1.4 Watertightness in end use condition for use scenario a)

The watertightness for use scenario a) shall be tested in a testing device described in Annex A.

One sample is used for the test. The box-shaped sample is made as a floor with adjoining walls. The sample shall be manufactured in a laboratory.

The mineral sealing slurry with all relevant components and or combination of components shall be installed according to the instructions of the manufacturer. A stoppage of work of 12 h shall be considered.

The main value of cured thickness of the sealing layer shall be smaller or equal to the cured thickness according to Ch. 2.2.1.3.

The floor shall be supplied with gullies and/or penetrations suitable for the intended use, at least one representative sample of each type of gully intended to be used with the floor.

The manufacturer chooses the different types of floor gullies and/or penetrations (shape: e.g. flange or clamping ring; material: e.g. stainless steel, plastics (PE, PP)) to install in the box.

Waterpressure: The minimum test water pressure shall be 2 kPa. The maximum test water pressure is 75 kPa (0,75 bar). The tests shall be performed taking the safety factor of 2,5 into account.

Test period:

- 4 weeks (28 days) with a test pressure of 2 kPa,
- increasing the test pressure to 50 kPa
- 1 week (7 days) holding the test pressure of 50 kPa
- increasing the test pressure to 75 kPa
- 1 week (28 days) holding the test pressure of 75 kPa

The layer thickness used in the test shall be measured. The main value of cured thickness shall be recorded.

The test is passed for the water pressure if after there is no leakage of the box. The use scenario for intended use and the admissible water pressure shall be stated in the ETA.

2.2.1.5 Watertightness in end use condition for use scenario b)

The waterproofing system shall be tested under water exposure from the backside.

3 test specimens with the dimensions of 20 x 20 x 6 cm³ for each level of water pressure shall be manufactured of permeable concrete according to EN 12390-8. The concrete shall be prepared according to EN 14891, Art. A.7. The curing time is at least 4 weeks at standard climate.

The small sides of the test specimens shall be sealed with epoxy resin.

Then, the test specimens shall be saturated with water ensuring that a coating surface appropriate to the actual exposure is formed. For verification purposes, the test specimens shall be saturated under water pressure of 150 kPa until water will be visible at the backsides of the test specimens in the test rig. The process shall be documented. Test specimens where no water is visible on their backsides shall not be used.

The waterproofing system shall be applied on the wet surface of the test specimen with or without pre-treatment in accordance with the manufacturer's instructions concerning quantity and the sequence of the layers and including post-treatment (where applicable). The main value of cured thickness of the sealing layer shall be smaller or equal to the cured thickness according to Ch. 2.2.1.3.

The coated test specimens shall be stored in accordance with the manufacturer's instructions until they are cured, however no longer than 28 days at standard climate. After recording the initial weight, the test

specimens are installed in the test rig in such a way, that the surface, coated with the waterproofing system to be tested, faces downwards.

A cylinder with an inner diameter of 140 mm shall be put on top of the uncoated surface and shall be sealed to the test specimen and covered with a cover plate (see EN 12390-8). The cylinder has to be filled with water and the pressure specified in the following table shall be applied. For each level of water pressure 3 test specimens shall be tested.

Intended use	Test water pressure	Test period	Level taking into account a safety factor $\mu_M = 2,5$
Soil moisture	0,5 m WC* (5 kPa)	14 days	20 cm WC (2 kPa)
Pressing water	> 0,5 m WC (>5 kPa) to 7,5 m WC (75 kPa)	28 days	> 20 cm WC (2 kPa) to 3 m WC (30 kPa)

*water column (WC)

After the test has been completed, the visible changes to the waterproofing system which occurred during the exposure shall be assessed. The test shall be considered satisfactory, if no leakage, blisters or cracks occurred during exposure.

At the end of the test period the test specimens shall be removed and dried at standard climate. The layer thickness used in the test shall be measured. The main value of cured thickness shall be recorded.

The use scenario for intended use and the admissible water pressure shall be stated in the ETA.

2.2.1.6 Water vapour permeability

The water vapour diffusion resistance shall be determined according to EN ISO 12572, test conditions C.

The water vapour diffusion factor μ and/or the water vapour diffusion-equivalent air layer thickness s_D shall be stated in the ETA.

2.2.1.7 Bond strength

The concrete slabs according to EN 1323 shall be stored at least 28 days at standard climate. After storing the concrete slabs are coated with or without pre-treatment in accordance with the manufacturer's instructions concerning quantity and the sequence of the layers and including post-treatment, where applicable.

The bond strength shall be tested on the basis of EN 1542 on 5 test specimens for each of the following tests.

The bond strength shall be tested after storing at 7 days at 23 °/95 % humidity and 21 days at standard climate.

Based on experience a sufficient adhesive of the product on the wall is given, if the mean value of bond strength is > 0,5 N/mm². Otherwise the resistance to tap water cannot be verified on the basis of this EAD. Where relevant, a more exact test method would be needed.

The bond strength shall be stated in the ETA.

2.2.1.8 Resistance to tap water

The bond strength shall be tested on test specimens after storing at 7 days at 23 °/95 % relative humidity and 21 days in water at 23 °C. The back side and the edges of the test specimens shall be sealed.

Based on experience the resistance to tap water is given, if the measured mean value of bond strength after water storing is > 0,5 N/mm². Otherwise the resistance to tap water cannot be verified on the basis of this EAD. Where relevant, a more exact test method would be needed.

The bond strength shall be stated in the ETA.

2.2.1.9 Resistance against freeze/thaw

The bond strength shall be tested on test specimens after storing at 7 days at 23 °C/95 % relative humidity and 21 days in water at 23 °C and afterwards 25 cycles of freeze and thaw according to EN 1348, chapter 8.5. The back side and the edges of the test specimens shall be sealed.

Based on experience the resistance against freeze/thaw is given, if the measured mean value of bond strength after freeze/thaw cycles is $> 0,5 \text{ N/mm}^2$. Otherwise the resistance against freeze/thaw cannot be verified on the basis of this EAD. Where relevant, a more exact test method would be needed.

The bond strength shall be stated in the ETA.

2.2.1.10 Sliding during installation

Sliding during installation shall be tested on concrete slabs according to EN 1542 at standard climate. The mineral sealing slurry shall be applied at the maximum installation temperature and with the maximum consumption given by the manufacturer.

After applying the sealing slurry the concrete slabs shall be raised up to a vertical position (90°) and shall be observed during the hardening period of 24 h.

Changes in the surface, e.g. sliding/flowing shall be recorded. The thickness according to Ch. 2.2.1.3 shall be measured on 10 points evenly distributed. The test is passed successfully, if the thickness shall be at least the minimum cured thickness.

2.2.2 Methods and criteria for assessing the performance of the mineral sealing slurry in relation to essential characteristics of the assembled product

2.2.2.1 Material

The following characteristics shall be determined:

- Description (e.g. basis of material, tradename)
- Particle size according to EN 933-1
- Ash content according to EN ISO 3451-1
- Consistence of fresh mortar according to EN 1015-3
- Bulk density of fresh mortar according to EN 1015-6
- Air content of fresh mortar according to EN 1015-6
- Flexural strength according to EN 1015-11
- Compressive strength according to EN 12190

The description of the material shall be given in the ETA.

2.2.2.2 Shrinkage

The shrinkage shall be tested according to EN 12617-4 by method described in Chapter 6 on 3 test specimens with the dimensions (1 x 4 x 16) cm³. The test specimen shall be stricken after storing for 24 h at 23 °C/95 % relative humidity. The geometry shall be measured 1 h after striking (reference) and then after 2, 3, 7, 14, 28, 56 and 90 d.

Based on experience the function the sealing layer is given (adhesion, width of cracks, waterproofing), if the shrinkage is $\leq 2,5 \text{ mm/m}$. Otherwise the product is not covered by this EAD. Where relevant, a more exact test method would be needed. The rate of shrinkage shall be stated in the ETA.

2.2.2.3 Thickness

The mineral sealing slurry shall be applied on a smooth flat surface (e.g. glass plate) with the consumption given by the manufacturer. The number of test specimens shall be at least 2. The

consumption is to determine in g/m². The thickness of the fresh applied coating has to be measured by an appropriate method (e.g. penetrometer) with an accuracy of 0,1 mm.

After curing and storing for 7 days at standard climate the cured thickness shall be determine with an accuracy of 0,1 mm.

For measurement of thickness at least 5 values of each test specimen shall be taken. The smallest value, the mean value and the consumption per mm cured thickness with an accuracy of 0,01 kg/m² shall be determined.

The consumption for the minimum cured thickness (see 2.2.3 and 2.2.) shall be stated in the ETA.

2.2.3 Methods and criteria for assessing the performance of the primer in relation to essential characteristics of the assembled product

2.2.3.1 Material

The following parameters shall be determined:

- Description (e.g. basis of material, woven/non woven, tradename)
- Density according to EN ISO 2811-1/-2
- Viscosity according to EN ISO 3219
- Ash Content according to EN ISO 3451-1
- pH-value
- IR-Spectra according to EN 1767

The description of the material shall be given in the ETA.

2.2.4 Methods and criteria for assessing the performance of the sealing details in relation to essential characteristics of the assembled product

2.2.4.1 Material

The following characteristics shall be determined:

- Description (e.g. basis of material, woven/non woven, tradename)
- Mass per unit according to EN 1849-2
- Tensile strength and elongation in longitudinal an transversal direction according to EN 527-3 or EN 12311-2, Test method A

The description of the material shall be given in the ETA.

2.2.4.2 Dimensions

The length, width and thickness shall be measured.

The dimensions shall be given in the ETA.

2.2.4.3 Resistance to alkalinity of the sealing details

The material of additional sealing details e.g. sealing tapes, floor- and wall sleeves and corners shall be stored according to EN 1847 for 28 days in potassium 3 % hydroxide solution with a temperature of 40 °C. The test liquid shall be renewed after 14 days.

After storing the test specimens shall be washed up with water and stored for 24 h at standard climate.

The resistance of alkalinity shall be tested by comparing the maximum tensile strength according to EN 527-3 before and after storing.

- Number of test specimens: 5

- Test specimen: (85 x 15) mm²
- Clamping length: 60 mm
- Test velocity: 50 mm/min
- Direction: transversal

Based on experience the durability is given, if the measured values of tensile strength after storing into alkalinity not deviate more than $\pm 20\%$ at the state of delivery. Otherwise the resistance cannot be verified on the basis of this EAD. Where relevant, a more exact test method would be needed.

3 ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE

3.1 System(s) of assessment and verification of constancy of performance to be applied

For the products covered by this EAD the applicable European legal act is: Decision 2003/655/EC

The system is 2+ for any use except for uses subject to regulations on reaction to fire.

For uses subject to regulations on reaction to fire the applicable AVCP systems are 1, or 3, or 4 depending on the conditions defined in the said Decision.

3.2 Tasks of the manufacturer

The cornerstones of the actions to be undertaken by the manufacturer of the product in the procedure of assessment and verification of constancy of performance are laid down in Table 2.

Table 4 Control plan for the manufacturer; cornerstones

No	Subject/type of control	Test or control method	Criteria, if any	Minimum number of samples	Minimum frequency of control
Factory production control (FPC)					
All components/compounds					
1	Content, emission and/or release of dangerous substances (IA1, IA2)	2.2.2.1	See control plan	1	Every five years
Primer (if any)					
2	Density	EN ISO 2811-1/2	See control plan	1	3 times a day
3	Viscosity	EN ISO 3219	See control plan	1	every 10th batch
4	Ash content	EN ISO 3451-1	See control plan	1	every 10th batch
5	pH-Value		See control plan	1	Each batch
6	IR-Spektra	EN 1767	See control plan	1	Once a year

No	Subject/type of control	Test or control method	Criteria, if any	Minimum number of samples	Minimum frequency of control
Mineral sealing slurry					
7	Particle size	EN 933-1	See control plan	3	Each delivery
8	Consistence	EN 1015-3	See control plan	1	every 10th batch
9	Density	EN 1015-6	See control plan	1	3 times a day
10	Air content	EN 1015-6	See control plan	1	3 times a day
11	Flexural strength	EN 1015-11	See control plan	3	1 time a day (value after 7d) every 10th batch (value after 28d)
12	Compressive Strength	EN 12190	See control plan	6	1 time a day (value after 7d) every 10th batch (value after 28d)
Sealing details (if any)					
13	Type of material	Description	See control plan	1	Each delivery
14	Geometry	Measurement	See control plan	1	Each delivery
15	Mass per unit	EN 1849-2	See control plan	1	Each delivery
16	Thickness	EN 1849-2	See control plan	1	Each delivery
17	Tensile Strength and elongation	EN 527-3 / EN 12311-2, Test method A	See control plan	5	Once a year

3.3 Tasks of the notified body

The intervention of the notified body is only necessary in so far as the conditions for the applicability of system 1 as defined in Decision 2003/655/EC are fulfilled.

The cornerstones of the actions to be undertaken by the notified body in the procedure of assessment and verification of constancy of performance for mineral sealing slurry are laid down in Table 3.

Table 5 Control plan for the notified body; cornerstones

No	Subject/type of control (<i>product, raw/constituent material, component</i> - <i>indicating characteristic concerned</i>)	Test or control method	Criteria, if any	Minimum number of samples	Minimum frequency of control
Initial inspection of the manufacturing plant and of factory production control					
1	Parameters according to Table 2 of this EAD	Control of devices and equipment and documentation of FPC for the product			When starting production or changes in the production process or new production line
Continuous surveillance, assessment and evaluation of factory production control (<i>for systems 1+, 1 and 2+ only</i>)					
2	Parameters according to table 2 of this EAD	Control of documentation of FPC for the product			At least once a year

4 REFERENCE DOCUMENTS

As far as no edition date is given in the list of standards thereafter, the standard in its current version at the time of issuing the European Technical Assessment is of relevance.

EN ISO 291	Plastics – Standard climates for conditioning and tests
EN ISO 2811-1	Paints and varnishes - Determination of density - Part 1: Pycnometer method
EN ISO 2811-2	Paints and varnishes - Determination of density - Part 2: Immersed body (plummet) method
EN 3219	Plastics - Polymers/resins in the liquid state or as emulsions or dispersions - Determination of viscosity using a rotational viscometer with defined shear rate
EN ISO 3451-1	Plastics - Determination of ash - Part 1: General methods
EN 933-1	Tests for geometrical properties of aggregates - Part 1: Determination of particle size distribution - Sieving method
EN 1015-3	Methods of test for mortar for masonry - Part 3: Determination of consistence of fresh mortar (by flow table)
EN 1015-6	Methods of test for mortar for masonry - Part 6: Determination of bulk density of fresh mortar
EN 1015-7	Methods of test for mortar for masonry - Part 7: Determination of air content of fresh mortar
EN 1015-11	Methods of test for mortar for masonry - Part 11: Determination of flexural and compressive strength of hardened mortar
EN 12190	Products and systems for the protection and repair of concrete structures - Test methods - Determination of compressive strength of repair mortar
EN 14629	Products and systems for the protection and repair of concrete structures - Test methods - Determination of chloride content in hardened concrete
EN 1849-2	Flexible sheets for waterproofing - Determination of thickness and mass per unit area - Part 2: Plastic and rubber sheets
EN 527-1	Plastics - Determination of tensile properties - Part 1: General principles
EN 527-3	Plastics - Determination of tensile properties - Part 3: Test conditions for films and sheets
EN 12311-2	Flexible sheets for waterproofing - Determination of tensile properties - Part 2: Plastic and rubber sheets for roof waterproofing
EN 13501-1	Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests
EOTA TR 034	General checklist for EADs/EATGs – Content and/or release of dangerous substances in products

CEN/TS 16637-2:2014	Construction products - Assessment of release of dangerous substances - Part 2: Horizontal dynamic surface leaching test
EN ISO 6341	Water quality - Determination of the inhibition of the mobility of <i>Daphnia magna</i> Straus (Cladocera, Crustacea) - Acute toxicity test
ISO 15799	Soil quality - Guidance on the ecotoxicological characterization of soils and soil materials
EN ISO 11348-1	Water quality - Determination of the inhibitory effect of water samples on the light emission of <i>Vibrio fischeri</i> (Luminescent bacteria test) - Part 1: Method using freshly prepared bacteria
EN ISO 11348-2	Water quality - Determination of the inhibitory effect of water samples on the light emission of <i>Vibrio fischeri</i> (Luminescent bacteria test) - Part 2: Method using liquid-dried bacteria
EN ISO 11348-3	Water quality - Determination of the inhibitory effect of water samples on the light emission of <i>Vibrio fischeri</i> (Luminescent bacteria test) - Part 3: Method using freeze-dried bacteria
OECD Test Guideline 301 part A, B or E	OECD Guideline for testing of chemicals
EN 12390-8	Testing hardened concrete - Part 8: Depth of penetration of water under pressure
EN ISO 12572	Hygrothermal performance of building materials and products - Determination of water vapour transmission properties (ISO 12572:2001)
EN 1323	Adhesives for tiles - Concrete slabs for tests
EN 1542	Products and systems for the protection and repair of concrete structures - Test methods - Measurement of bond strength by pull-off
EN 1348	Adhesives for tiles - Determination of tensile adhesion strength for cementitious adhesives
EN 12617-4	Products and systems for the protection and repair of concrete structures - Test methods; Part 4: Determination of shrinkage and expansion
DIN 52450	Testing of inorganic non-metallic building materials; determination of shrinkage and expansion on small specimens

ANNEX A: TEST EQUIPMENT USE SCENARIO A:

