

European Technical Assessment

**ETA-18/0472
of 17/02/2020**

(English translation prepared by CSTB – Original version in French language)

GENERAL PART

**Technical Assessment Body issuing the
European Technical Assessment:**

Centre Scientifique et Technique du Bâtiment
(CSTB)

Trade name of the construction product:

ENDURIS 3500 E / E+ System

**Product family to which the construction
product belongs:**

Product Area Code: 03
Liquid applied roof waterproofing on the basis of
polysiloxane

Manufacturer:

Momentive Performance Materials GmbH
Kaiser Wilhelm Allee 1, Gebäude V7,
D-51368 Leverkusen
Germany

Manufacturing plant(s):

Momentive Performance Materials Silicones B.V.
Plasticslaan 1
4612 PX
Bergen op Zoom
The Netherlands

**This European Technical Assessment
contains:**

7 pages including 1 Annex(es) 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 030019-00-
0402, edition November 2016.

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SPECIFIC PART

1. Technical description of the product

The liquid applied roof waterproofing " ENDURIS 3500 E / E+ System " is a kit which consists of a single component polysiloxane based synthetic liquid material, with or without reinforcement.

Application is made in one time without drying time (wet on wet application):

Version 1 (non reinforced):

- One layer of "Enduris 3500 E / E+" (1,5 mm with wet gauge)

Version 2 (reinforced):

- One layer of "Enduris 3500 E / E+" (0,75 mm with wet gauge)
- One layer of reinforcement "(Non-woven fabric 90 to 110 g/m²)"
- One layer of "Enduris 3500 E / E+" (0,75 mm with wet gauge)

The colour of "Enduris 3500 E / E+" in both versions can vary between white and black with different shades of grey.

For an adequate adhesion of the waterproofing layer, the substrate may require a primer:

Admitted substrates	Primers
Concrete	none
Steel, Stainless steel	none
Extruded polystyrene panel	none
Polyurethane or polyisocyanurate panel with kraft or aluminum facing	none
SBS and APP bitumen waterproofing sheets	None (in option Bleed blocker)
PVC-P based waterproofing membranes	none
TPO - FPO based waterproofing membranes	SS4004P primer

For details and flashing application, the thixotropic version "Enduris Liquid Flashing", which is a part of the kit, can be used.

Optionally a Bleed Blocker, which is a part of the kit, can be used to prevent discoloration of the roof surface due to bleeding of bitumen oil from underlying Bitumen waterproofing sheets. The bleed blocking effect has not been assessed.

For version 1 (non- reinforced), the minimum layer thickness of the roof waterproofing applied " ENDURIS 3500 E / E+ System " after drying is 1,4 mm, it is non- accessible.

For version 2 (reinforced) the minimum layer thickness of the roof waterproofing applied " ENDURIS 3500 E / E+ System " after drying is 1,6 mm, it is accessible for maintenance of the roof only.

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

The liquid applied roof waterproofing for the waterproofing of roof surfaces against penetration of atmospheric water.

The roof waterproofing shows certain levels of performance according to European Assessment Document 030019-00-0402 which facilitates the use taking account of national requirements.

In the manufacturer's technical dossier (MTD) to this European technical assessment (ETA) the manufacturer gave information concerning substrates which the roof waterproofing is suitable for and on how these substrates shall be pre-treated.

The verifications which are based on this ETA give reason for the assumption of an intended working life of the roof waterproofing of 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works

3. Performances of the product and references to the methods used for their assessment

Performances of the liquid applied waterproofing kit, related to the basic requirements for construction works (hereinafter BWR), were determined according to the European Assessment Document 030019-00-0402.

These performances, given in the following paragraphs, are valid as long as the components are the ones described in § 1 and Annexe 1 of this ETA.

3.1 Mechanical resistance and stability (BWR 1)

Not relevant.

3.2 Safety in case of fire (BWR 2)

Reaction to fire: E

External fire performance: Broof(t1), Broof(t2), Broof (t3), Broof(t4) (according to the classification reports n°18903 of June 2018 by Warringtonfiregent and the classification report n°0017-L-19/2 of March 2019 by Kiwa BDA Testing B.V.)

3.3 Hygiene, health and the environment (BWR 3)

3.3.1 Water vapour permeability

Water vapour permeability (Sd) is 1,5 m

3.3.2 Watertightness

Kit " ENDURIS 3500 E / E+ System " is watertight according to Technical Report EOTA 003.

3.3.3 Effects of highest and lowest surface temperatures

The resistance to mechanical damage is P1 to P2 depending on the nature of the substrate, cf. table on annex 1 (1/2), at the lowest surface temperature TL4 and the highest surface temperature TH4.

3.3.4 Resistance against ageing

Performance and tensile properties, after exposure W3 of accelerated ageing by heat, artificial weathering and accelerated ageing by hot water are kept.

3.3.5 Resistance to plant roots

No performance assessed.

3.3.6 Release of dangerous substances

According to Technical Report EOTA n° 034, the product does not contain dangerous substance.

3.4 Safety and accessibility in use (BWR 4)**3.4.1 Resistance to wind load**

Bond strength has been checked for substrate listed in §1. it is > 50kPa.

3.4.2 Resistance to slipperiness

No performance assessed.

3.5 Protection against noise (BWR 5)

No performance assessed.

3.6 Energy economy and heat retention (BWR 6)

No performance assessed.

3.7 Sustainable use of natural resources (BWR 7)

No performance assessed.

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

According to Decision 97/556/EC (Decision of the Commission of 14 July 1997, L 229 of 20.8.1997, p. 15), as amended by Decision 2001/596/EC (Decision of the Commission of 8 January 2001, L 209 of 2.8.2001, p. 33), the systems of AVCP given in the following table apply:

Product	Intended uses	Level or Class	System
Liquid applied roof waterproofing kits	For all roof waterproofing uses	-	3

The systems of AVCP are described in Annex V of Regulation (EU) No 305/2011, as amended by Delegated Regulation (EU) No 568/2014.

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 the CSTB.

Issued in Marne-la-Vallée on 09/06/2020

by

Stephane GILLIOT, DEIS/ FACET of the CSTB



Applicable to roof waterproofing " ENDURIS 3500 E / E+ System ":

	VERSION 1 Without reinforcement	VERSION 2 With reinforcement
Minimum thickness of resin (wet gauge)	1,5 mm	0,75 + 0,75 mm
Minimum quantity consumed of resin	1,9 kg/m ²	1,9 kg/m ²
Minimum total dry thickness of the kit	1,4 mm	1,6 mm

Levels of use categories according to EAD 030019-00-0402 with relation to:

Working life	W3	
Climatic zones	S	
Imposed loads (on compressive and non compressive substrate)	P1	P2
Roof slope	S1 à S4	
Lowest surface temperature	TL4	
Highest surface temperature	TH4	

Performance du kit :

External fire performance	Broof(t1), Broof(t2), Broof (t3), Broof(t4)
Reaction to fire	E
Water vapour diffusion resistance	Sd = 1,5 m
Watertightness	Watertight
Statement on dangerous substances	Does not contain any
Resistance to plant roots	No performance assessed
Resistance to wind loads	≥ 50 kPa on substrate listed in §1
Resistance to slipperiness	No performance assessed

Roof waterproofing " ENDURIS 3500 E / E+ System"
Liquid applied roof waterproofing on the basis of polysiloxane
Characteristics of " ENDURIS 3500 E / E+ System"
ANNEX 1 (1/2)
 of ETA-18/0472

Installation

The fitness for use of the roof waterproofing can be assumed only, if the processing is carried out according to the processing instructions stated in the MTD by the manufacturer, in particular taking account of the following points:

- processing by appropriately trained personnel,
- processing of only those components which are a marked component of the kit,
- processing with the required tools and adjuvants,
- precautions during processing,
- inspecting the roof surface for cleanliness and correct preparation and applying the primer before applying the roof waterproofing,
- inspecting compliance with suitable weather and curing conditions,
- ensuring a wet thickness of the waterproofing by processing of appropriate minimum quantities of material, of at least:
 - o 1,5 mm for version 1
 - o 0,75 mm + Reinforcement + 0,75 mm mm for version 2
- inspections during installation and of the finished roof waterproofing and documentation of the results.

Roof waterproofing ' ENDURIS 3500 E / E+ System'' <i>Liquid applied roof waterproofing on the basis of polysiloxane</i>	ANNEX 1 (2/2) of ETA-18/0472
Intended use of ' ENDURIS 3500 E / E+ System''	