Deutsches Institut für Bautechnik

Public-law institution jointly founded by the federal states and the Federation

European Technical Assessment Body for construction products

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# European Technical Assessment

# ETA-19/0120 of 5 March 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 | Styrodur 3035 CS<br>Styrodur 4000 CS<br>Styrodur 5000 CS |
| Product family to which the construction product belongs | Extruded polystyrene foam boards as load bearing layer and/or thermal insulation outside the waterproofing |
| Manufacturer | Karl Bachl GmbH & Co. KG<br>Deching 3<br>94133 Röhrnbach<br>GERMANY |
| Manufacturing plant | Werk 1 |
| This European Technical Assessment contains | 13 pages including 1 annex which form an integral part of this assessment |
| This European Technical Assessment is issued in accordance with Article 95(4) of Regulation (EU) No 2024/3110, on the basis of | EAD 040650-00-1201 |
| This version replaces | ETA-19/0120 issued on 2 July 2025 |

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## Specific Part

### 1 Technical description of the product

The extruded polystyrene foam boards are made of rigid cellular plastics material extruded from polystyrene or one of its copolymers and which has a closed cell structure. The blowing agent mixture is carbon dioxide ($CO_2$), isobutane and additives. The extruded polystyrene foam boards have a skin on both surfaces and a special edge treatment (shiplap).

The extruded polystyrene foam boards do not contain Hexabromocyclododecane (HBCD).

The extruded polystyrene foam boards have the following designations:

"Styrodur 3035 CS",

"Styrodur 4000 CS" and

"Styrodur 5000 CS".

The extruded polystyrene foam boards are manufactured with the following dimensions:

Nominal thicknesses:

50 mm to 200 mm for Styrodur 3035 CS,
60 mm to 140 mm for Styrodur 4000 CS,
60 mm to 120 mm for Styrodur 5000 CS

Nominal length: 1250 mm

Nominal widths: 600 mm

The European Technical Assessment has been issued for the products on the basis of agreed data/information, deposited with Deutsches Institut für Bautechnik, which identifies the product that has been assessed. The European Technical Assessment applies only to products corresponding to this agreed data/information.

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

The extruded polystyrene foam boards are intended to be used as load bearing layer and /or thermal insulation outside the waterproofing. The boards are laid uniformly on the substrate to which they are applied. In particular the following applications are intended:

- Load bearing and thermal insulation underneath foundation slabs
- External horizontal and vertical thermal insulation of in-ground constructions in non-structural applications (also in case of groundwater)
- Inverted roof insulation (including park deck and green roof applications)

The performance according to section 3 only applies if the thermal insulation boards are installed according to the manufacture's installation instructions and if they are protected from precipitation, wetting or weathering during transport and storage before installation.

Concerning the application of the thermal insulation boards, also the respective national regulations shall be observed.

Where the thermal insulation boards are fixed by using adhesives, only such adhesions shall be used, which are suitable for this purpose. The assessment of these fixings is not subject of this European Technical Assessment.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of the extruded polystyrene foam boards of at least 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

For sampling, conditioning and testing the provisions of the EAD 040650-00-1201 "Extruded polystyrene foam boards as load bearing layer and / or thermal insulation outside the water-proofing" apply.

### 3.1 Mechanical resistance and stability (BWR 1)

| Essential characteristic | Performance |
|---|---|
| Compressive stress at 10 % deformation or compressive strength | Level (individual values may fall below this level up to 10 %): |
| test acc. to EN 826:2013 | |
| "Styrodur 3035 CS" | ≥ 300 kPa |
| "Styrodur 4000 CS" | ≥ 500 kPa |
| "Styrodur 5000 CS" | ≥ 700 kPa |
| Slip deformation | See Annex A |
| Compressive stress or compressive strength in the transverse and longitudinal directions | No performance assessed |
| Characteristic value of compressive stress or compressive strength | |
| 5 %-fractile value for a one-sided confidence level of 75 % under unknown or known variance using ISO 12491:1997 | |
| "Styrodur 3035 CS" | |
| Dicke 50 mm ≤ d ≤ 120 mm | $\sigma_{0,05}$ = 353 kPa (n= 50; $\sigma_{mean}$ = 464 kPa; $s_\sigma$ = 61 kPa)[1] |
| Dicke 120 mm < d ≤ 140 mm | $\sigma_{0,05}$ = 387 kPa (n= 22; $\sigma_{mean}$ = 442 kPa; $s_\sigma$ = 30 kPa)[2] |
| Dicke 140 mm < d ≤ 200 mm | $\sigma_{0,05}$ = 394 kPa (n= 22; $\sigma_{mean}$ = 494 kPa; $s_\sigma$ = 56 kPa) |
| "Styrodur 4000 CS" | |
| Dicke 60 mm ≤ d ≤ 140 mm | $\sigma_{0,05}$ = 562 kPa (n= 49; $\sigma_{mean}$ = 650 kPa; $s_\sigma$ = 50 kPa)[3] |
| "Styrodur 5000 CS" | |
| Dicke 60 mm ≤ d ≤ 120 mm | $\sigma_{0,05}$ = 736 kPa (n= 33; $\sigma_{mean}$ = 810 kPa; $s_\sigma$ = 41 kPa)[4] |
| Compressive creep | See Annex A |
| Behaviour under shear load (large-sized specimen) | See Annex A |
| Creep under shear load | See Annex A |
| Creep under combined compressive and shear load | See Annex A |

[1] Analysis of the measured values of compressive stress at 2% deformation: $\sigma_{0,05}$ = 310 kPa (n= 50; $\sigma_{mean}$ = 403 kPa; $s_\sigma$ = 57 kPa)
[2] Analysis of the measured values of compressive stress at 2% deformation: $\sigma_{0,05}$ = 318 kPa (n= 22; $\sigma_{mean}$ = 388 kPa; $s_\sigma$ = 38 kPa)
[3] Analysis of the measured values of compressive stress at 2% deformation: $\sigma_{0,05}$ = 495 kPa (n= 49; $\sigma_{mean}$ = 572 kPa; $s_\sigma$ = 43 kPa)
[4] Analysis of the measured values of compressive stress at 2% deformation: $\sigma_{0,05}$ = 610 kPa (n= 33; $\sigma_{mean}$ = 678 kPa; $s_\sigma$ = 38 kPa)

| Essential characteristic | Performance |
|---|---|
| Compressive modulus of elasticity | No performance assessed |
| Adhesion behaviour under compressive and shear load on large-sized samples | See Annex A |
| Shear strength | No performance assessed |
| Density<br>test acc. to EN 1602:2013<br>"Styrodur 3035 CS"<br>"Styrodur 4000 CS"<br>"Styrodur 5000 CS" | <br>density range:<br>32 kg/m³ - 39 kg/m³<br>38 kg/m³ - 43 kg/m³<br>44 kg/m³ - 49 kg/m³ |

## 3.2 Safety in case of fire (BWR 2)

| Essential characteristic | Performance |
|---|---|
| Reaction to fire<br>test acc. to EN ISO 11925-2:2010 | Class E<br>acc. to EN 13501-1:2007 + A1:2009 |

## 3.3 Energy economy and heat retention (BWR 6)

| Essential characteristic | Performance |
|---|---|
| Thermal conductivity<br>at mean reference temperature of 10 °C<br>test acc. to EN 12667:2001 or EN 12939:2001<br>and aging procedure according to<br>EN 13164:2012+A1:2015, Annex C with deviating storage time period (sliced specimen) of<br>(90 +2/-2) days prior to testing | |
| "Styrodur 3035 CS" | |
| thickness 50 mm ≤ d ≤ 60 mm | $\lambda_{D(90d)}$ = 0,034 W/(m ·K) |
| thickness 60 mm < d ≤ 140 mm | $\lambda_{D(90d)}$ = 0,035 W/(m ·K) |
| thickness 140 mm < d ≤ 200 mm | $\lambda_{D(90d)}$ = 0,038 W/(m ·K) |
| "Styrodur 4000 CS" | |
| thickness 60 mm ≤ d ≤ 70 mm | $\lambda_{D(90d)}$ = 0,034 W/(m ·K) |
| thickness 80 mm | $\lambda_{D(90d)}$ = 0,035 W/(m ·K) |
| thickness 80 mm < d ≤ 100 mm | $\lambda_{D(90d)}$ = 0,037 W/(m ·K) |
| thickness 100 mm < d ≤ 140 mm | $\lambda_{D(90d)}$ = 0,038 W/(m ·K) |
| "Styrodur 5000 CS" | |
| thickness 60 mm ≤ d ≤ 70 mm | $\lambda_{D(90d)}$ = 0,034 W/(m ·K) |
| thickness 80 mm | $\lambda_{D(90d)}$ = 0,035 W/(m ·K) |
| thickness 80 mm < d ≤ 100 mm | $\lambda_{D(90d)}$ = 0,037 W/(m ·K) |
| thickness 100 mm < d ≤ 120 mm | $\lambda_{D(90d)}$ = 0,038 W/(m ·K) |
| Moisture conversion coefficient | No performance assessed |

| Essential characteristic | Performance |
|---|---|
| Water absorption | |
| Long term water absorption by total immersion | |
| test acc. to EN 12087:2013 (method 2A) | WL(T)0,7<br>($W_{lt}$ ≤ 0,7 Vol.%) |
| Long term water absorption by diffusion | |
| test acc. to EN 12088:2013 | |
| thickness < 100 mm | WD(V)3<br>($W_{dV}$ ≤ 3,0 Vol.%) |
| thickness ≥ 100 mm | WD(V)1<br>($W_{dV}$ ≤ 1,0 Vol.%) |
| Freeze-thaw resistance<br>test acc. to EN 12091:2013 | |
| using the wet test specimens from having done the water diffusion test in accordance with EN 12088: 2013 | FTCD1<br>($W_V$ ≤ 1,0 Vol.%) |
| Reduction in compressive stress at 10 % deformation or in compressive strength of the re-dried specimens, when tested in accordance with EN 826:2013 | ≤ 10 % |
| Water vapour diffusion resistance factor | No performance assessed |
| Geometrical properties | tolerance |
| Thickness | |
| test acc. EN 823:2013 (clause 7.2, figure 2, measuring set-up 3) | |
| thickness ≤ 120 mm | ± 2 mm |
| thickness > 120 mm | +4/-2 mm |
| Length, width | |
| test acc. EN 822:2013 | ± 8 mm |
| Squareness<br>in direction of length and width; in direction of thickness | |
| test acc. EN 824:2013 | 5 mm/m |
| Flatness<br>in direction of length and width | |
| test acc. EN 825:2013 | |
| thickness ≤ 120 mm | 2 mm |
| thickness > 120 mm | 3 mm |

| Essential characteristic | Performance |
|---|---|
| Deformation under specified compressive load and temperature conditions<br>test acc. to EN 1605:2013 | <br>load: 40 kPa; temperature: (70 ± 1) °C; time: (168 ± 1) h<br>≤ 5 % |
| Dimensional stability under specified conditions<br>test acc. to EN 1604:2013 | <br>temperature: 70 °C and 90 % R.H.<br>DS(70,90)<br>($\Delta\varepsilon_l \leq 5$ %, $\Delta\varepsilon_b \leq 5$ %, $\Delta\varepsilon_d \leq 5$ %) |
| Tensile strength perpendicular to faces<br>test acc. to EN 1607:2013 | TR150<br>($\sigma_{mt} \geq 150$ kPa) |
| Volume percentage of closed cells<br>test acc. to EN ISO 4590:2016 (method 1 with correction) | <br>≥ 95 % |

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

In accordance with EAD 040650-00-1201, the applicable European legal acts are: 1995/467/EC and 1999/91/EC[5].

The systems to be applied are:

System 1 for Essential characteristics concerning Mechanical resistance and stability (BWR 1)

System 3 all other Essential characteristics

## 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 6 March 2026 by Deutsches Institut für Bautechnik

Frank Iffländer
Referatsleiter

*beglaubigt:*
Meyer

[5] as amended

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**Styrodur 3035 CS**
**Styrodur 4000 CS**
**Styrodur 5000 CS**

**Annex A**

## 1. Compressive stress

**Slip deformation**
acc. to EAD, chapter 2.2.1.2
Deformation until the conventional elastic zone (distinct straight portion of the force-displacement curve) is reached

| **Styrodur 3035 CS** ($\varphi$ =32 kg/m$^3$) | | | | |
|---|---|---|---|---|
| thickness (mm) | 1x120 | 2x120 | 1x100 | 3x100 |
| compressive stress, σa | 90 | 74 | 79 | 80 |
| initial displacement Xa (mm) | **1,0** | **1,7** | **0,5** | **1,3** |
| | | | | |
| **Styrodur 5000 CS** ($\varphi$ =43 kg/m$^3$) | | | | |
| thickness (mm) | 1x120 | 2x120 | 1x100 | 3x100 |
| compressive stress, σa | 115 | 126 | 117 | 142 |
| initial displacement Xa (mm) | **0,9** | **1,6** | **0,9** | **1,6** |

## 2. Compressive creep

### 2.1 Compressive creep (single-layer board)

acc. to EAD, chapter 2.2.3.1

| **Styrodur 3035 CS** | **thickness 50 mm** | | | **thickness 120 mm** | | |
|---|---|---|---|---|---|---|
| density (kg/m$^3$) | 32 | | | 32 | | |
| compressive stress / deformation acc. to EN 826 (kPa / %) | 428/2 | | | 451/5 | | |
| **load stage (kPa)** | **90** | **130** | **190** | **90** | **130** | **190** |
| $X_0$ (mm) | 0,19 | 0,26 | 0,38 | 0,45 | 0,61 | 0,93 |
| $X_{ct}$ (mm) | 0,15 | 0,23 | 0,44 | 0,25 | 0,42 | 1,56 |
| $X_{ct50}$ (mm) | 0,50 | 0,69 | 1,25 | 0,66 | 1,13 | 3,75 |
| **$X_{t50}$ (mm)** | **0,69** | **0,95** | **1,63** | **1,11** | **1,74** | **4,68** |
| | | | | | | |
| **Styrodur 3035 CS** | **thickness 140 mm** | | | **thickness 200 mm** | | |
| density (kg/m$^3$) | 33,4 | | | 37,8 | | |
| compressive stress / deformation acc. to EN 826 (kPa / %) | 492/10 (413/2) | | | 529/2 | | |
| **load stage (kPa)** | **100** | **130** | **185** | **90** | **130** | **190** |
| $X_0$ (mm) | 0,48 | 0,59 | 0,87 | 0,59 | 0,74 | 0,98 |
| $X_{ct}$ (mm) | 0,32 | 0,43 | 0,78 | 0,50 | 0,58 | 0,76 |
| $X_{ct50}$ (mm) | 0,94 | 1,28 | 2,22 | 1,44 | 1,71 | 2,29 |
| **$X_{t50}$ (mm)** | **1,41** | **1,87** | **3,10** | **2,03** | **2,45** | **3,27** |

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**Styrodur 3035 CS**
**Styrodur 4000 CS**
**Styrodur 5000 CS**

**Annex A**

| **Styrodur 4000 CS** | **thickness 60 mm** | | | **thickness 120 mm** | | |
|---|---|---|---|---|---|---|
| density (kg/m³) | 36,1 | | | 37,4 | | |
| compressive stress / deformation acc. to EN 826 (kPa / %) | 616/10 (489/2) | | | 553/2 | | |
| **load stage (kPa)** | **130** | **180** | **255** | **130** | **180** | **255** |
| $X_0$ (mm) | 0,26 | 0,35 | 0,50 | 0,40 | 0,54 | 0,77 |
| $X_{ct}$ (mm) | 0,17 | 0,25 | 0,65 | 0,32 | 0,49 | 1,10 |
| $X_{ct50}$ (mm) | 0,46 | 0,68 | 1,98 | 0,88 | 1,37 | 3,69 |
| **$X_{t50}$ (mm)** | **0,72** | **1,03** | **2,48** | **1,28** | **1,92** | **4,46** |

| **Styrodur 4000 CS** | **thickness 140 mm** | | |
|---|---|---|---|
| density (kg/m³) | 37,8 | | |
| compressive stress / deformation acc. to EN 826 (kPa / %) | 672/3 | | |
| **load stage (kPa)** | **130** | **180** | **255** |
| $X_0$ (mm) | 0,51 | 0,57 | 0,77 |
| $X_{ct}$ (mm) | 0,29 | 0,53 | 0,97 |
| $X_{ct50}$ (mm) | 0,76 | 1,29 | 2,79 |
| **$X_{t50}$ (mm)** | **1,27** | **1,86** | **3,56** |

| **Styrodur 5000 CS** | **thickness 60 mm** | | | **thickness 120 mm** | | |
|---|---|---|---|---|---|---|
| density (kg/m³) | 44 | | | 44,6 | | |
| compressive stress / deformation acc. to EN 826 (kPa / %) | 791/10 (608/2) | | | 899/10 (753/2) | | |
| **load stage (kPa)** | **180** | **250** | **350** | **180** | **250** | **350** |
| $X_0$ (mm) | 0,33 | 0,41 | 0,58 | 0,43 | 0,65 | 0,81 |
| $X_{ct}$ (mm) | 0,22 | 0,34 | 1,19 | 0,43 | 0,61 | 1,36 |
| $X_{ct50}$ (mm) | 0,68 | 0,95 | 3,84 | 1,30 | 1,93 | 4,25 |
| **$X_{t50}$ (mm)** | **1,01** | **1,36** | **4,42** | **1,73** | **2,58** | **5,06** |

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**Styrodur 3035 CS**
**Styrodur 4000 CS**
**Styrodur 5000 CS**

**Annex A**

## 2.2. Compressive creep (multi-layer installation)

acc. to EAD, chapter 2.2.3.1

| **Styrodur 3035 CS** | **thickness 300 mm (3x 100mm)** | | | **thickness 240 mm (2x120) mm** | | |
|---|---|---|---|---|---|---|
| density (kg/m³) | 32 | | | 32 | | |
| compressive stress / deformation acc. to EN 826 (kPa / %) | 425/10 (338/2) | | | 468/8 (382/2) | | |
| **load stage (kPa)** | **90** | **130** | **190** | **90** | **130** | **190** |
| $X_0$ (mm) | 1,76 | 2,21 | 3,15 | 1,35 | 1,48 | 2,00 |
| $X_{ct}$ (mm) | 0,66 | 1,04 | 4,00 | 0,57 | 0,67 | 1,84 |
| $X_{ct50}$ (mm) | 1,89 | 2,72 | 11,50 | 1,31 | 1,63 | 4,77 |
| **$X_{t50}$ (mm)** | **3,65** | **4,93** | **14,65** | **2,66** | **3,11** | **6,77** |

| **Styrodur 5000 CS** | **thickness 300 mm (3x 100mm)** | | | **thickness 240 mm (2x120) mm** | | |
|---|---|---|---|---|---|---|
| density (kg/m³) | 44 | | | 45,4 | | |
| compressive stress / deformation acc. to EN 826 (kPa / %) | 840/10 (639/2) | | | 890/10 (700/2) | | |
| **load stage (kPa)** | **180** | **250** | **350** | **180** | **250** | **350** |
| $X_0$ (mm) | 2,24 | 2,54 | 3,61 | 1,20 | 1,53 | 2,31 |
| $X_{ct}$ (mm) | 1,25 | 1,38 | 3,38 | 0,87 | 1,20 | 2,01 |
| $X_{ct50}$ (mm) | 3,28 | 3,69 | 8,36 | 2,36 | 3,32 | 6,02 |
| **$X_{t50}$ (mm)** | **5,52** | **6,22** | **11,98** | **3,57** | **4,85** | **8,32** |

## 3. Behaviour under shear load (large-sized specimen)

acc. to EAD, chapter 2.2.4

| **Styrodur 3035 CS** | **thickness 140 mm** | **thickness 200 mm** |
|---|---|---|
| density (kg/m³) | 36,5 / 34,1 / 33,5 | 36 |
| **shear strength $\tau_{large}$** acc. to EAD chapter 2.2.4 and the guidelines in EN 12090 (kPa) | **174** | **126** |

| **Styrodur 5000 CS** | **thickness 120 mm** |
|---|---|
| density (kg/m³) | 45,2 |
| **shear strength $\tau_{large}$** acc. to EAD chapter 2.2.4 and the guidelines in EN 12090 (kPa) | **209** |

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**Styrodur 3035 CS**
**Styrodur 4000 CS**
**Styrodur 5000 CS**

**Annex A**

**4. Creep under shear load**
acc. to EAD, chapter 2.2.5

| **Styrodur 3035 CS** | **thickness 140 mm** | **thickness 200 mm** |
|---|---|---|
| Density (kg/m³) | 36,5 / 34,1 / 33,5 | 37 |
| shear strength / deformation acc. to EN 12090 (kPa) | 174 | 126 |
| **load stage (kPa)** | **61** | **44,1** |
| $X_{\tau 0}$ (mm) | 1,50 | 1,68 |
| $X_{\tau ct}$ (mm) | 0,73 | 0,18 |
| $X_{\tau ct50}$ (mm) | 1,86 | 0,31 |
| **$X_{\tau t50}$ (mm)** | **3,36** | **1,99** |

| **Styrodur 5000 CS** | **thickness 120 mm** |
|---|---|
| Density (kg/m³) | 45,2 |
| shear strength / deformation acc. to EN 12090 (kPa) | 209 |
| **load stage (kPa)** | **73** |
| $X_{\tau 0}$ (mm) | 0,79 |
| $X_{\tau ct}$ (mm) | 0,44 |
| $X_{\tau ct50}$ (mm) | 1,41 |
| **$X_{\tau t50}$ (mm)** | **2,20** |

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**Styrodur 3035 CS** **Annex A**
**Styrodur 4000 CS**
**Styrodur 5000 CS**

## 5. Creep under combined compressive and shear load
acc. to EAD, chapter 2.2.6

| **Styrodur 3035 CS** | | |
|---|---|---|
| **thickness** | **140 mm** | |
| Density (kg/m³) | 36,5 / 34,1 / 33,5 | |
| compressive stress / deformation acc. to EN 826 (kPa / %) | 537/2 417/2 426/4 (363/2) | |
| shear strength / deformation acc. to EN 12090 (kPa) | 174 | |
| **load stage (kPa)** | **61** | **138** |
| deformation under | shear load | compressive load |
| $X_{\tau 0}$ /$X_0$ (mm) | 1,48 | 1,36 |
| $X_{\tau ct}$ /$X_{ct}$ (mm) | 0,97 | 1,47 |
| $X_{\tau ct50}$/$X_{ct50}$ (mm) | 2,14 | 2,46 |
| **$X_{\tau t50}$/$X_{t50}$ (mm)** | **3,62** | **3,82** |
| | | |
| **Styrodur 3035 CS** | | |
| **thickness** | **200 mm** | |
| Density (kg/m³) | 37 | |
| compressive stress / deformation acc. to EN 826 (kPa / %) | 490 | |
| shear strength / deformation acc. to EN 12090 (kPa) | 126 | |
| **load stage (kPa)** | **44,1** | **147** |
| deformation under | shear load | compressive load |
| $X_{\tau 0}$ /$X_0$ (mm) | 1,81 | 0,41 |
| $X_{\tau ct}$ /$X_{ct}$ (mm) | 0,45 | 0,38 |
| $X_{\tau ct50}$/$X_{ct50}$ (mm) | 0,79 | 3,22 |
| **$X_{\tau t50}$/$X_{t50}$ (mm)** | **2,60** | **2,03** |

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**Styrodur 3035 CS**
**Styrodur 4000 CS**
**Styrodur 5000 CS**

**Annex A**

| **Styrodur 5000 CS** | | |
|---|---|---|
| **thickness** | **120 mm** | |
| Density (kg/m³) | 45,2 | |
| compressive stress / deformation acc. to EN 826 (kPa / %) | 747(2) 859(10)/647(2) | |
| shear strength / deformation acc. to EN 12090 (kPa) | 209 | |
| **load stage (kPa)** | **73** | **239** |
| deformation under | shear load | compressive load |
| $X_{\tau 0}$ /$X_0$ (mm) | 0,84 | 1,44 |
| $X_{\tau ct}$ /$X_{ct}$ (mm) | 0,78 | 1,56 |
| $X_{\tau ct50}$/$X_{ct50}$ (mm) | 1,99 | 2,82 |
| **$X_{\tau t50}$/$X_{t50}$ (mm)** | **2,83** | **4,26** |

**6. Adhesion behaviour under compressive and shear load on large-sized samples**
acc. to EAD, chapter 2.2.8

| **Styrodur 3000 CS** | | | |
|---|---|---|---|
| **Adhesive friction coefficient between the extruded polystyrene foam boards and in-situ concrete as well as a concrete finished part with foil**<br>acc. to EAD chapter 2.2.8, Annex A, A.3.2 | | | |
| **thickness** | **1x 120 mm** | | |
| density (kg/m³) | 32 | | |
| **Compression stress – load stage (kPa)** | **20** | **60** | **120** |
| Adhesive friction coefficient regarding the compression stress – load stage | 0,40 | 0,44 | 0,45 |
| **Adhesive friction coefficient** | **0,43** | | |