



Element Materials Technology  
Rotterdam B.V.  
Zekeringstraat 33  
1014 BV Amsterdam  
Netherlands  
Tel: +31 (0) 20-55633555  
[www.element.com](http://www.element.com)



Member of



[www.eota.eu](http://www.eota.eu)

## European Technical Assessment

**ETA-20/1199**  
of 2020/12/18

### General Part

<b>Technical Assessment Body Issuing the European Technical Assessment:</b>	<b>Element Materials Technology Rotterdam B.V.</b>
<b>Trade Name of the Construction Product:</b>	<b>SIKA BOOM® - 420 FIRE</b>
<b>Product Family to Which the Construction Product Belongs:</b>	EC PAC 35 – Fire Stopping, Fire Sealing & Fire Protective Products. Fire Retardant Products
<b>Manufacturer:</b>	<b>Sika AG</b> Tueffenwies 16 8048 Zurich Switzerland
<b>Manufacturing Plant(s):</b>	U/006
<b>This European Technical Assessment Contains:</b>	16 pages including 3 Annexes which form an integral part of this assessment.
<b>This European Technical Assessment is Issued in Accordance with Regulation (EU) No 305/2011, On the Basis Of:</b>	EAD 350141-00-1106 Firestopping and Fire Sealing Products: Linear joint and gap seals, Issued September 2017
<b>This Version Replaces:</b>	ETA 19/0796, issued on 2019-12-18

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.  
Communication of this European Technical Assessment, including transmission by electronic means, shall be in full (excepted the confidential Annex(es) referred to above). However, partial reproduction may be made, with the written consent of the issuing Technical Assessment Body. Any partial reproduction has to be identified as such.

## 1. Technical Description of the Product

- a. SIKA BOOM® - 420 FIRE is a Polyurethane foam used to form linear gap seals where gaps are present in wall and floor constructions and linear joint seals where wall and floor constructions abut.
- b. SIKA BOOM® - 420 FIRE is a one part component Polyurethane foam, applied with a gun or nozzle applicator into or between the separating element/elements to a specified minimum depth.
- c. SIKA BOOM® - 420 FIRE is supplied in canisters ranging in size:
  - 250 mL (52 x 161 mm)
  - 500 mL (65 x 195 mm)
  - 560 mL (65 x 195 mm)
  - 750 mL (65 x 300 mm)
  - 800 mL (65 x 300 mm)
  - 860 mL (65 x 300 mm)
- d. SIKA BOOM® - 420 FIRE is supplied in two colour variants, Grey and Pink.
- e. Installation of the SIKA BOOM® - 420 FIRE See 5.5

## 2. Specification of the Intended Use(s) in Accordance with the Applicable European Assessment Document (hereinafter EAD)

The intended use of system SIKA BOOM® - 420 FIRE is to reinstate the fire resistance performance of gaps in and joints between rigid wall constructions, gaps in and joints between rigid floor constructions.

- 1) The specific elements of construction that the system SIKA BOOM® - 420 FIRE may be used to provide a gap or joint seal in, are as follows:

Rigid Floors: The floor must have a minimum thickness of 200 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m<sup>3</sup>.

Rigid walls: The wall must have a minimum thickness of 150 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m<sup>3</sup>.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.

- 1) The system SIKA BOOM® - 420 FIRE may be used to provide a linear joint or gap seal with specific supporting constructions and substrates (for details see Annex C).
- 2) The maximum permitted joint/gap width for SIKA BOOM® - 420 FIRE is 20 mm.
- 3) The provisions made in this European Technical Assessment are based on an assumed working life of the SIKA BOOM® - 420 FIRE of 10 years, provided that the conditions laid down in sections 5.1/5.2/5.5 for the packaging/transport/ storage/installation/use/repair are met. 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.

### 2.1 Use Category

Type Y<sub>2</sub>: Intended for use at temperatures below 0°C, but with no exposure to rain or UV radiation.

### 3. Performance of the Product and References to the Methods Used for its Assessment

BWR	Characteristic	Assessment of characteristic
2	Safety in case of fire	—
—	Reaction to fire	See Clause 3.1.1
—	Resistance to fire	See Clause 3.1.2
3	Hygiene, Health and the Environment	—
—	Dangerous substances	See Clause 3.2.1
4	Safety and Accessibility in use	—
—	Durability and serviceability	See Clause 3.3.1

#### 3.1 Safety In Case Of Fire

##### 3.1.1 Reaction To fire

System SIKA BOOM® - 420 FIRE is classified 'E' in accordance with EN 13501-1.

##### 3.1.2 Resistance To fire

System SIKA BOOM® - 420 FIRE has been tested in accordance with EN 1366-4: 2006 + A1: 2010 based upon the test results and the field of direct application specified within EN 1366-4: 2006 + A1: 2010, the SIKA BOOM® - 420 FIRE has been classified in accordance with EN 13501-2, as given in Annex C:

The SIKA BOOM® - 420 FIRE seals may only be used in the elements of construction described in Annex C and against the substrates described in Annex C.

Provisions shall be taken such that floor joint seals cannot be stepped on e.g. by covering with wire mesh or floor finishes.

#### 3.2 Hygiene, Health And The Environment

##### 3.2.1 Dangerous Substances

The applicant has presented a declaration that SIKA BOOM® - 420 FIRE does not contain any substance of high concern with regards to REACH Regulations (EC) No 1907/2006 and the CLP regulation (EC) No 1272/2008 (the European GHS regulation) and are compliant with the requirements reference to <http://ec.europa.eu/enterprise/construction/cpd-ds/index.cfm>

Confirmation has further been declared that:

- SIKA BOOM® - 420 FIRE does not contain 0.1% (w/w) or more of any substance listed in the most recent Candidate List of substances of very high concern for Authorisation, published by the European Chemicals Agency ECHA on the 15.01.2019. The duty is respected to follow the development of new entries of the list and to duly inform customers, should it occur for a substance contained within the product.
- It does not contain 0.1% (w/w) or more of any substance listed in the most recent version of the Authorisation List (annex XIV of the REACH regulation) published by the European Chemicals Agency ECHA on the 14.05.2019.
- Its hazard classification is compliant with the requirements of the CLP regulation with all adaptations to the technical progress (ATP) up to the 13<sup>th</sup> ATP of 04.10.2018.

- For one of its components (Diisocyanate) a restriction (requiring safety measures) is part of the annex XVII of the REACH regulation. Its requirements are fully implemented.
- Its Safety Data Sheet is compliant with the requirements of the annex 2 of REACH regulation, updated by the regulation (EU) 2015/830 (of 28.05.2015). It is being applied correctly in order to fulfil the communication duties towards the customers.

All dangerous chemical substances are below the classification limits of 67/548/EEC.

In addition to the specific clauses relating to dangerous substances contained in this European Technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

### 3.3 Safety and Accessibility In Use

#### 3.3.1 Durability And Serviceability

SIKA BOOM® - 420 FIRE has been tested in accordance with EOTA Technical Report - TR024 – Edition November 2006, for the type Y<sub>2</sub> use category specified in EAD 350141-00-1106, and the results of the tests have demonstrated suitability for penetration seals intended for use at temperatures below 0°C, but with no exposure to rain or UV radiation.

#### 4. Assessment and Verification of Constancy of Performance (hereinafter AVCP) System Applied, with reference to its Legal Base

According to the decision 1999/454/EC of the European Commission the system of assessment and verification of constancy of performance (see Annex V to the Regulation (EU) No 305/2011) given in the following table apply:

<b>Products</b>	<b>Intended Use/s</b>	<b>AVCP System</b>
Fire stopping and fire sealing products	For fire compartmentation and / or fire protection or fire performance	System 1

## **5. Technical Details Necessary for the Implementation of the AVCP System, as Provided for in the Applicable EAD**

### **5.1 Tasks For The Manufacturer**

#### **5.1.1 Factory Production Control**

The manufacturer has a Factory Production Control System (FPC) and exercises permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer are documented in a systematic manner in the form of policies, procedures and work instructions. This FPC system ensures that the product is in conformity with this European Technical Assessment.

The manufacturer shall only use raw materials or components that are supplied with the relevant inspection documents as laid down in the Control Plan. All incoming raw materials shall be subject to inspection, verification, controls and tests (as applicable) by the manufacturer.

The Control Plan, Reference, 4.10.13, which is part of the technical documentation of this European Technical Assessment includes details of the extent, nature and frequency of testing and controls to be performed within the FPC system and has been agreed between the Assessment holder and Element Materials Technology Rotterdam B.V... Any changes to the FPC; Control Plan or the Product shall only be made following approval by Element Materials Technology Rotterdam B.V.

The results of FPC are recorded and evaluated. These records include but are not limited to:

- Product specification and designation, basic materials and components
- Type(s) of Control testing
- Date of manufacture of the product and date of testing of the product or basic material and components;
- Result of control and testing and, if appropriate, comparison with requirements;
- Signature of the person responsible for FPC

These records shall be presented to Element Materials Technology Rotterdam B.V. upon request.

The manufacturer shall, on the basis of a contract, involve a body (bodies) which is (are) approved for the tasks referred to in section 5.2 of this ETA. For this purpose, the "Control Plan" referred to in sections 5.1.1 and 5.2 shall be handed over by the manufacturer to the approved body or bodies involved.

#### **5.1.2 Other Tasks Of The Manufacturer**

##### **5.1.2.1 Additional Information**

The manufacturer shall provide a technical data sheet and an installation instruction with the following minimum information:

(a) Technical data sheet:

- Field of application:

Building elements for which the linear joint seal is suitable, type and properties of the building elements like minimum thickness, density, and - in case of lightweight constructions – the construction requirements.

Limits in size, minimum thickness etc. of the linear joint seal

- Construction of the linear joint seal including the necessary components and additional products (e.g. backfilling material) with clear indication whether they are generic or specific.

(b) Installation instruction:

- Steps to be followed
- Procedure in case of retrofitting.

The manufacturer shall, on the basis of a contract, involve a body which is approved for the tasks referred to in section 3.1 in the field of penetration seals in order to undertake the actions laid down in section 3.3. For this purpose, the "control plan" referred to in sections 3.2.1.1 and 3.2.2 shall be handed over by the manufacturer to the approved body or bodies involved.

The manufacturer shall make a declaration of conformity, stating that the construction product is in conformity with the provisions of this European technical assessment.

## **5.2 Tasks Of Notified Body**

### **5.2.1. Initial Type Testing Of The Product**

For initial 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 Element Materials Technology Rotterdam B.V. and the Notified Body.

### **5.2.2 Initial Inspection Of Factory And Of Factory Production Control**

The Notified Body shall ascertain that, in accordance with the provisions laid down in the Control Plan, Reference 4.10.13, the factory and the factory production control are suitable to ensure continuous and orderly manufacturing of the product according to the specifications mentioned in Section 2, as well as to the Annexes to this European Technical Assessment.

### **5.2.3 Continuous Surveillance**

The Notified Body shall visit the factory twice a year for regular inspection. It shall be verified that the system of factory production control and the specified manufacturing process is maintained in accordance with the provisions of this European Technical Assessment and the Control Plan.

Continuous surveillance and assessment of factory production control shall be performed in accordance with the provisions laid down in the agreed Control Plan.

The results of product certification and continuous surveillance shall be made available on demand by the certification or inspection body or to Element Materials Technology Rotterdam B.V. In cases where the provisions of this European Technical Assessment and the prescribed Control Plan are no longer fulfilled, the conformity certificate shall be withdrawn and the relevant authority/ies shall be informed.



### **5.3 Manufacturing**

The European technical assessment is issued for SIKA BOOM® - 420 FIRE on the basis of agreed data/information, deposited with Element Materials Technology Rotterdam B.V., which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to Element Materials Technology Rotterdam B.V. before the changes are introduced. Element Materials Technology Rotterdam B.V. will decide whether or not such changes affect the ETA and consequently the validity of the CE marking on the basis of the ETA and if so whether further assessment or alterations to the ETA, shall be necessary

### **5.4 Packaging, Transport And Storage**

The following measures should be adopted with regard to handling and storage of SIKA BOOM® - 420 FIRE.

- Handling
  - Information for safe handling: No special measures required.
  - Information about protection against explosions and fires: No special measures required.
  
- Storage
  - Store dry and in a cool place.
  - Don't store the product under +5 °C and not over +25 °C
  - Keep out of reach of children

### **5.5 Use, Maintenance, Repair**

The SIKA BOOM® - 420 FIRE should be installed and used as described earlier in this document. The substrate must be solid, clean and sound. It must be free from grease, oils, duct and loose particles.

System SIKA BOOM® - 420 FIRE seals which are damaged after installation, should be removed and replaced with undamaged seals.

In the area covered by the ETAs when the set up recommendation have been followed there is no maintenance protocol to be followed. The product does not need any maintenance in the life time indicated in the ETAs.

Issued in Amsterdam, Netherlands on 2020/12/18

By

A handwritten signature in black ink, appearing to read "Paul Duggan", enclosed within a thin black rectangular border.

Paul Duggan  
Deputy TAB Manager

## **Annex A**

### **Reference Documents**

EN 13501-1	Fire classification of construction products and building elements – Part 1: Classification using test data from reaction to fire tests
EN 13501-2	Fire classification of construction products and building elements – Part 2: Classification using test data from fire resistance tests
EOTA TR 024	Characterisation, Aspects of Durability and Factory Production Control for Reactive Materials, Components and Products

## **Annex B**

### **Description Of Product And Product Literature**

#### **SIKA BOOM® - 420 FIRE**

A detailed specification of the product is contained in document "Evaluation Report" relating to this European Technical Assessment of SIKA BOOM® - 420 FIRE which is a non-public part of this ETA.

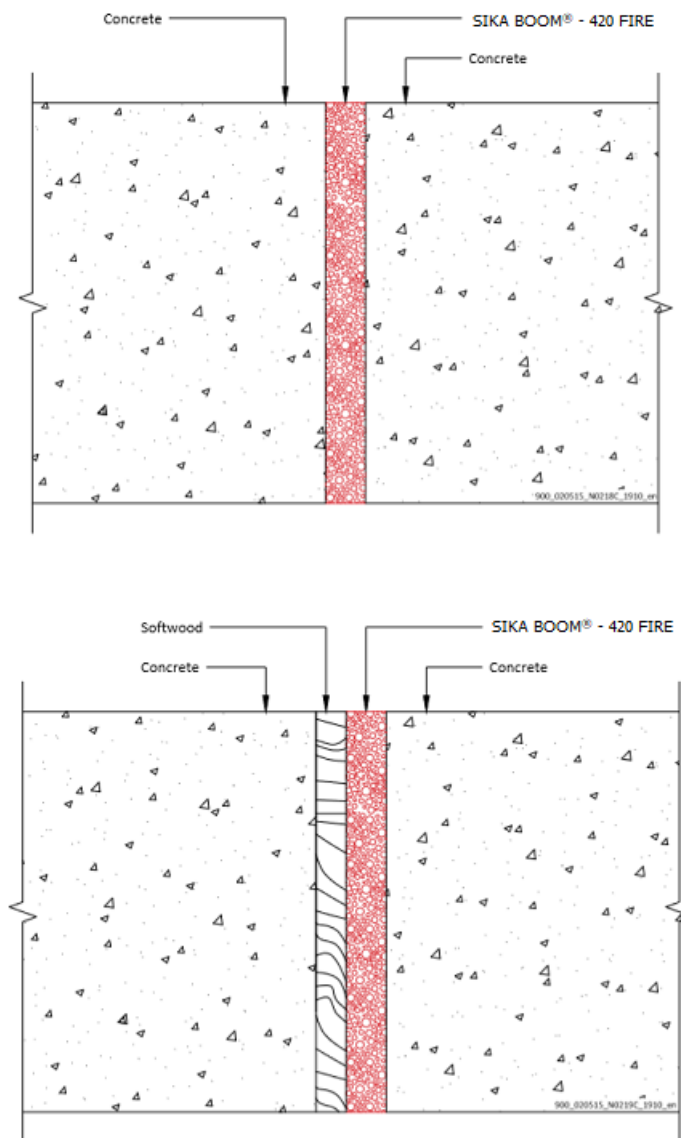
## Annex C

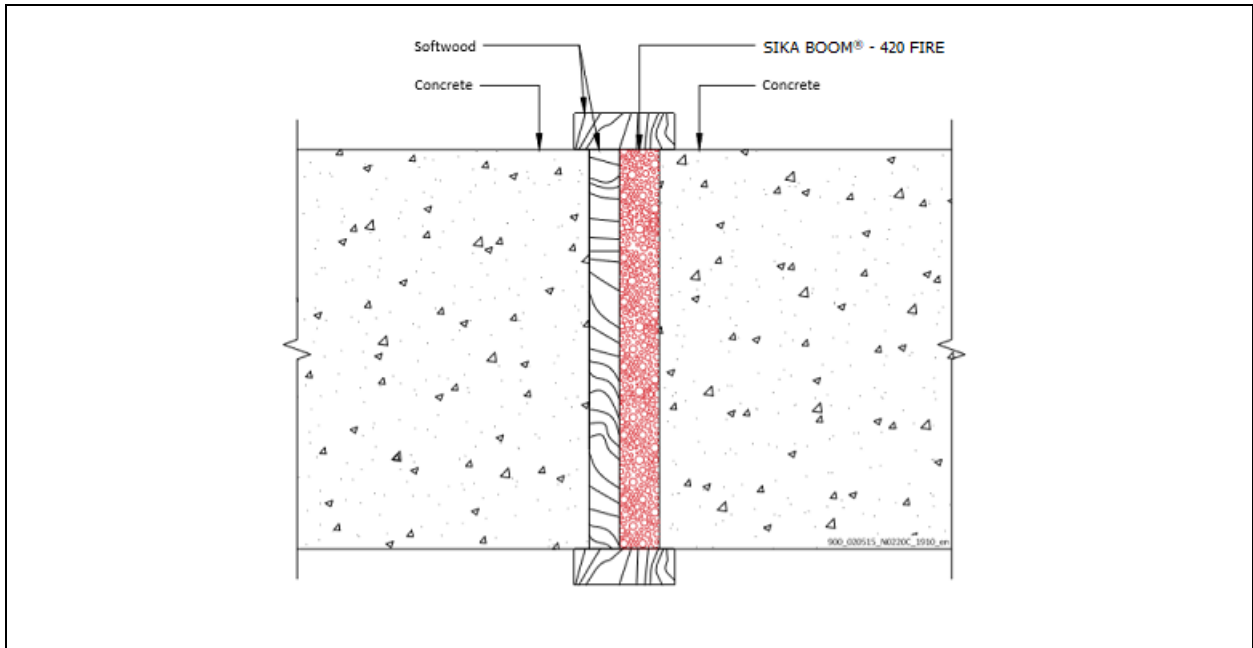
### Resistance to Fire Classification of SIKA BOOM® - 420 FIRE

**C.1 Rigid floor constructions according to section 2 with floor thickness of minimum 200 mm**

**C.1.1 Linear joint or gap seal, horizontally orientated with foam seal to the full 200 mm depth.**

Construction details:





### C.1.1.1

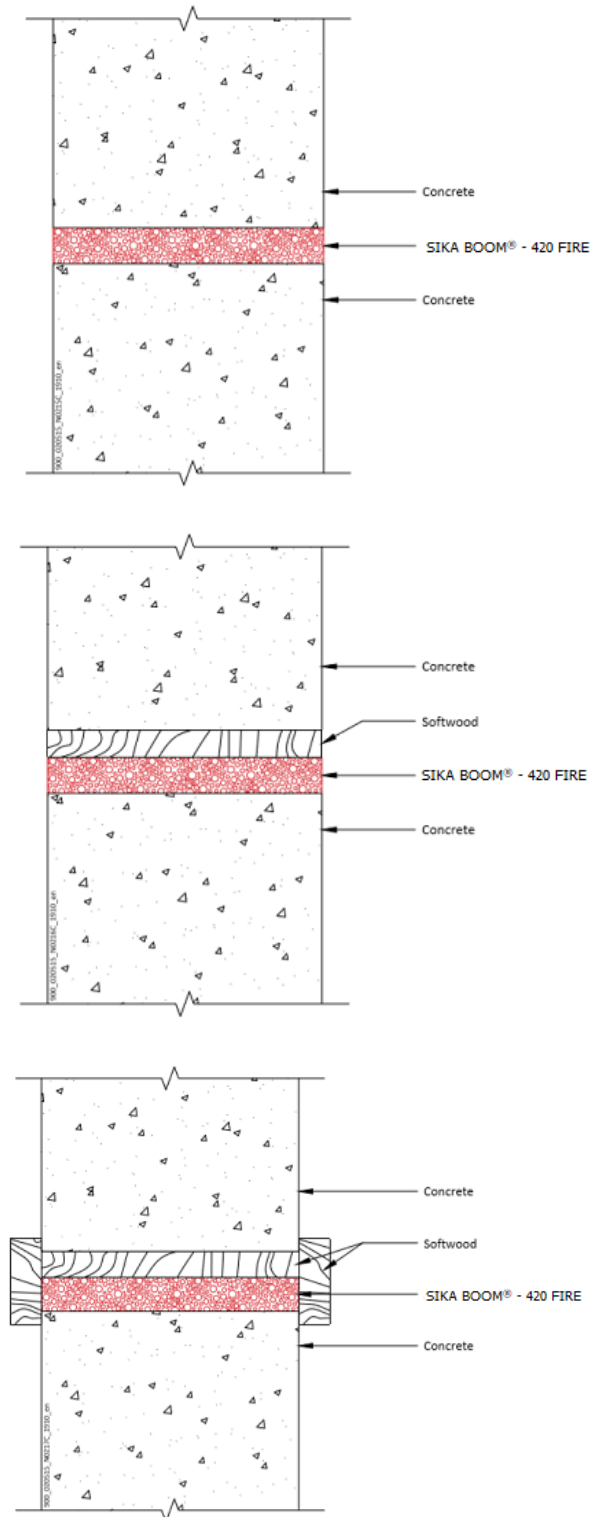
SIKA BOOM® - 420 FIRE Linear Joint Seals in 200 mm thick Rigid Floors.			
Substrates	Seal Depth	Applicator type	Classification
AAC/AAC	200 mm	Gun / Nozzle	EI 90 -H - X - F - W 0-20
		Gun / Nozzle	EI 120 -H - X - F - W 0-10
		Nozzle	EI 120 -H - X - F - W 0-20
AAC/Softwood Timber	200 mm	Gun / Nozzle	EI 120 - H - X - F - W 0-20
AAC/Softwood with 50 x 18 mm Softwood architrave on both sides	200 mm	Gun / Nozzle	EI 120 - H - X - F - W 0-20

\*AAC- Aerated Concrete

## C.2 Rigid wall constructions according to section 2 with wall thickness of minimum 150 mm

### C.2.1 Linear joint or gap seal, vertically or horizontally orientated (in a wall construction) with sealant to the full 150 mm depth of the wall.

Construction details:



**C.2.1.1**

<b>SIKA BOOM® - 420 FIRE Linear Joint Seals in 150 mm thick Rigid Walls.</b>			
<b>Substrates</b>	<b>Seal Depth</b>	<b>Applicator type</b>	<b>Classification</b>
AAC/AAC	150 mm	Gun / Nozzle	<b>EI 60 – V – X – F – W 0-20</b>
		Gun / Nozzle	<b>EI 180 – V – X – F – W 0-10</b>
		Gun / Nozzle	<b>EI 60 – T – X – F – W 0-20</b>
AAC/Softwood Timber	150 mm	Gun / Nozzle	<b>EI 120 – V – X – F – W 0-20</b>
		Gun / Nozzle	<b>EI 120 – T – X – F – W 0-20</b>
AAC/Softwood with 50 x 18 mm Softwood architrave on both sides	150 mm	Gun / Nozzle	<b>EI 90 – V – X – F – W 0-20</b>
		Gun / Nozzle	<b>EI 120 – T – X – F – W 0-20</b>

**\*AAC- Aerated Concrete**