



Designated according to The Construction Products (Amendment etc.) (EU Exit) Regulations 2020

UK Technical Assessment	UKTA-0836-22/6406 of 14/10/2022
Technical Assessment Body issuing the UK Technical Assessment:	British Board of Agrément
Trade name of the construction product:	AQUAPANEL Cement Board Outdoor
Product family to which the construction product belongs:	Cement Bonded Board
Manufacturer:	Knauf Aquapanel GmbH & Co. KG Zur Helle 11 58638 Iserlohn DEUTSCHLAND
Manufacturing plant(s):	Several Plants: 1. Knauf Aquapanel GmbH & Co. KG Zur Helle 11 58638 Iserlohn DEUTSCHLAND 2. Knauf Aquapanel GmbH & Co. KG Sehensander Weg 19 86633 Neuburg a.d. Donau DEUTSCHLAND
This UK Technical Assessment contains:	13 pages including 3 annexes which form an integral part of this assessment
This UK Technical Assessment is issued in accordance with The Construction Products (Amendment etc.) (EU Exit) Regulations 2020 on the basis of:	UKAD 21-0024-0504 <i>Cement-bonded board</i>

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1 Technical description of the product

The cement bonded board AQUAPANEL Cement Board Outdoor is a specific board manufactured from a cement mixture, mineral lightweight aggregates and water. The board is reinforced on both sides with alkali-resistant glass fibre fabric.

The board is coated with a hydrophobic agent to prevent absorption of humidity during the installation (construction phase).

The boards are manufactured with a thickness of 12.5 mm and are usually available in nominal lengths up to 3000 mm and nominal width up to 1250 mm.

The cement bonded board AQUAPANEL Cement Board Outdoor can be classified in category B according to BS EN 12467.

The boards are used with one of the following fixing elements:

- AQUAPANEL Maxi Screw SN - needlepoint according to Annex A1
- AQUAPANEL Maxi Screw SB – drill point according to Annex A2
- AQUAPANEL Rustproofed Screw SN needlepoint according to Annex A3
- AQUAPANEL Rustproofed Screw SB drill point according to Annex A4

2 Specification of the intended use(s) in accordance with the applicable UK Assessment Document (hereinafter UKAD)

The cement bonded board AQUAPANEL Cement Board Outdoor may be used for non-structural external lining e.g. for walls, facades, rainscreens, suspended ceiling systems or floor constructions.

The performances given in Section 3 are only valid if the cement bonded board AQUAPANEL Cement Board Outdoor is used in compliance with the specifications and conditions given in Annex B.

The verifications and assessment methods on which this UK Technical Assessment is based lead to the assumption of a working life of the cement bonded board AQUAPANEL Cement Board Outdoor 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

3.1 Mechanical resistance and stability (BWR 1)

The essential characteristics regarding mechanical resistance and stability are included under the Basic Works Requirement safety in use.

3.2 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Class A1 according to BS EN 13501-1 ⁽¹⁾

(1)BS EN 13501-1 *Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests*

3.3 Health, hygiene and the environment (BWR 3)

Essential characteristic	Performance
Content, emission and/or release of dangerous substances Substance(s) classified as EU-cat. Carc. 1A/1B ⁽¹⁾ Substance(s) classified as EU-cat. Muta. 1A/1B ⁽¹⁾ Substance(s) classified as EU-cat. Acute Tox. 1, 2 and/or 3; substance(s) classified as EU-cat. Repr. 1A/1B; substance(s) classified as EU-cat. STOT SE 1 and/or STOT RE 1 ⁽¹⁾	The product does not contain these dangerous substances ⁽²⁾
Biocides	Not contained ⁽²⁾
Release scenarios regarding BWR 3: IA1, IA2, IA3 (according to EOTA TR 034)	

(1) In accordance with Regulation (EC) No 1272/2008.

(2) Assessment based on the detailed manufacturer's statements.

3.4 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Thickness	$e = 12.5 \text{ mm} \pm 1.25 \text{ mm}$
Dimension (length and width)	Annex C
Straightness of edges	0.1 % = Level I acc. to EN 12467
Squareness of edges	2 mm/m = Level I acc. to EN 12467
Density	$\rho_{\text{mean}} = 1200 \pm 175 \text{ kg} \cdot \text{m}^{-3}$
Moisture content	H = 10,3 % by mass
Water impermeability	Passed
Dimensional stability - length	$\delta l_{65.85} = 0.2 \text{ mm} \cdot \text{m}^{-1}$ $\delta l_{65.30} = -0.4 \text{ mm} \cdot \text{m}^{-1}$
Dimensional stability - thickness	$\delta l_{65.85} = 0.02 \%$ $\delta l_{65.30} = -0.04 \%$
Bending strength	$f_{m.0.k} = 5.0 \text{ N} \cdot \text{mm}^{-2}$ $f_{m.90.k} = 8.1 \text{ N} \cdot \text{mm}^{-2}$
Bending modulus of elasticity	$E_{m.0.\text{mean}} = \text{No Performance Assessed}$ $E_{m.90.\text{mean}} = \text{No Performance Assessed}$
Pull through resistance	
- AQUAPANEL Maxi Screw SN (Annex A1)	$f_{\text{head,k}} = 390 \text{ N}$
- AQUAPANEL Maxi Screw SB (Annex A2)	$f_{\text{head,k}} = 400 \text{ N}$
- AQUAPANEL Rustproofed Screw SN (Annex A3)	$f_{\text{head,k}} = 460 \text{ N}$
- AQUAPANEL Rustproofed Screw SB (Annex A4)	$f_{\text{head,k}} = 430 \text{ N}$
Impact resistance	$IR_{\text{mean}} = 16.0 \text{ mm} \cdot \text{m}^{-1}$
Water adsorption	$w_a = 21.2 \%$ by mass
Freeze-thaw resistance for category B	$R_{L,FTC} = 0.91$
Heat-rain resistance for category B	Passed
Warm water resistance for category B	$R_{L,WW} = 0.79$
Soak-dry resistance for category B	$R_{L,SD} = 1.00$
Durability of metal parts	Annex B1

3.5 Protection against noise (BWR 5)

Not relevant.

3.6 Energy economy and heat retention (BWR 6)

Essential characteristic	Performance
Thermal conductivity	$\lambda_{10,\text{tr}} = \text{No Performance Assessed}$
Air permeability	The AQUAPANEL Cement Board Outdoor is not permeable to air.

3.7 Sustainable use of natural resources (BWR 7)

Not Assessed

4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied

4.1 System of assessment and verification of constancy of performance

According to UKAD 21-0024-0504 and Annex V of the Construction Products Regulation (Regulation (EU) 305/2011 as brought into UK law and amended, the system of assessment and verification of constancy of performance (AVCP) 4 applies.

In addition, with regard to reaction to fire for products covered by this UKAD the applicable European legal act is: 1989/106/EC (EU)

The system to be applied is: 3

In addition, with regard to dangerous substances for products covered by this UKAD the applicable European legal act is: 98/437/EC (EU)

The system to be applied is: 3

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable UKAD

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with the British Board of Agrément and made available to the UK Approved Bodies involved in the conformity attestation process.

5.1 UKCA marking for the product/ system must contain the following information:

- Identification number of the Approved Body
- Name/address of the manufacturer of the product/ system
- Marking with intention of clarification of intended use
- Date of marking
- UKTA number.

On behalf of the British Board of Agrément



Date of Issue: 14 October 2022

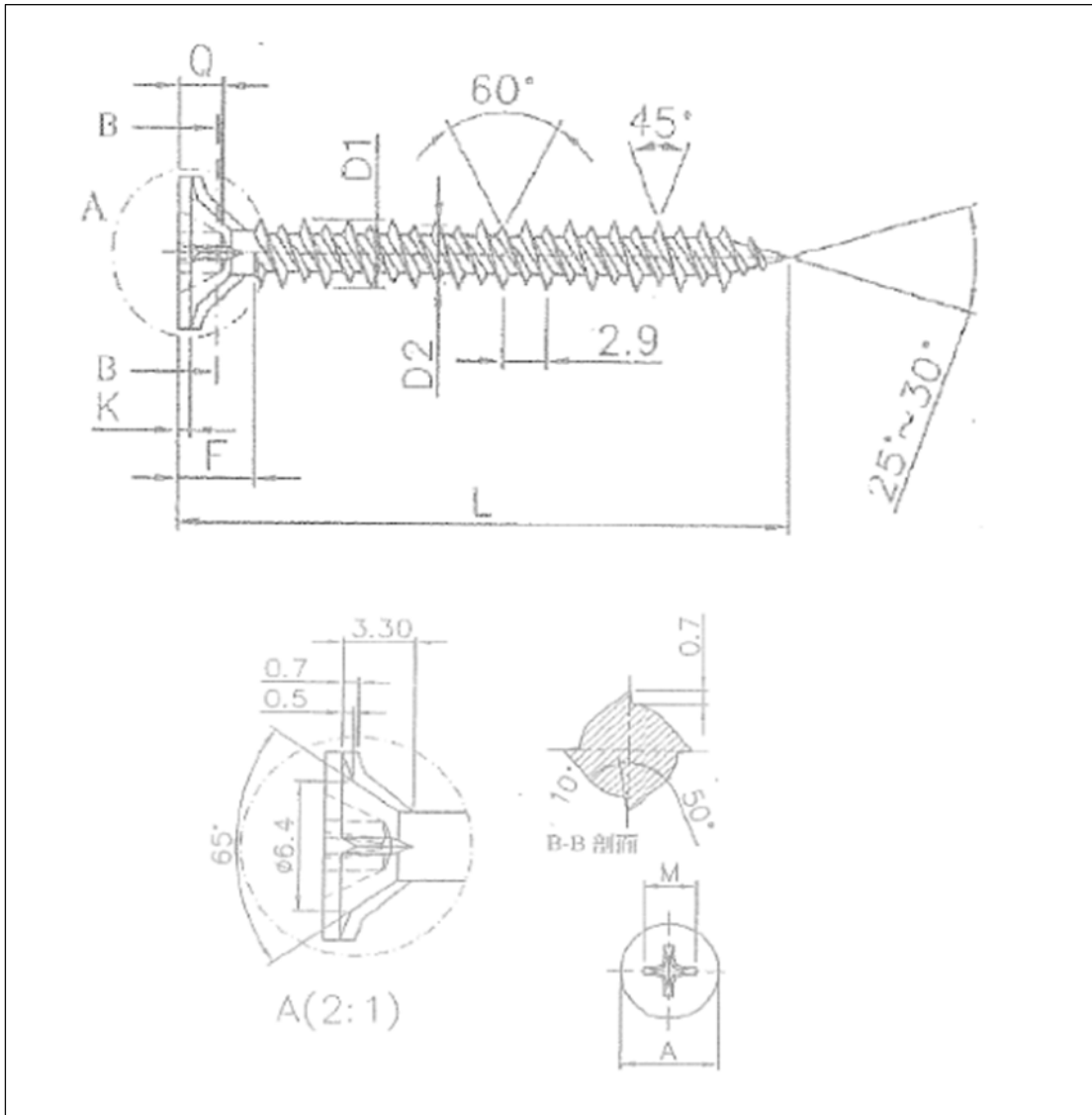
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ANNEX A1 : AQUAPANEL Maxi Screw SN 25 / SN 39/ SN 55 (with needlepoint)

This annex applies to the product described in the main body of the UK Technical Assessment.



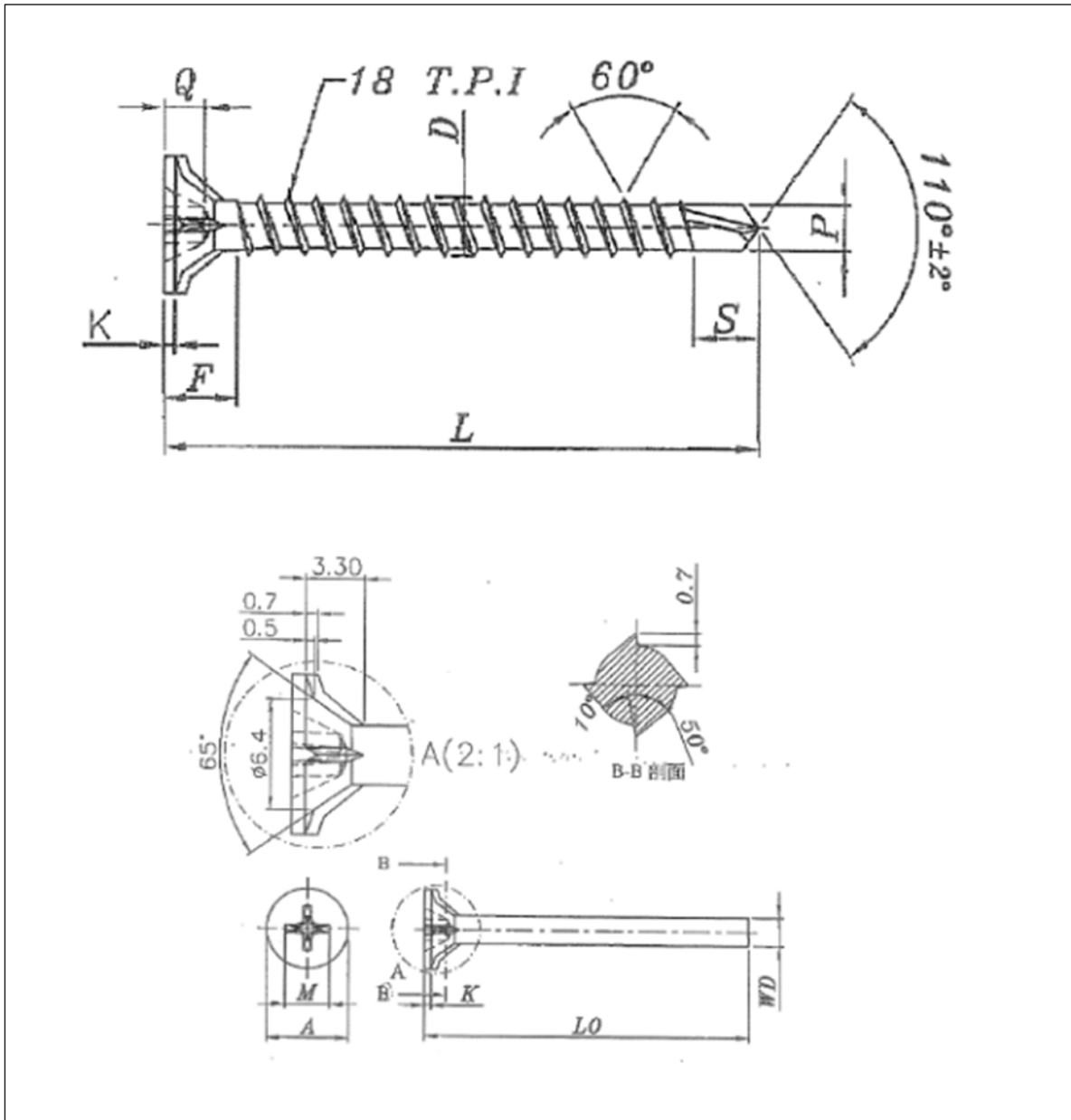
	SN 25	SN 39	SN 55
Screw length [mm]	25	39	55

Material: C 22 (similar to Ck22 / Cm22)
 Material No.: SAE 1022 (similar to 1.1151 / 1.1149 acc. to EN 10083-2)

Dimensions in mm; without scale

ANNEX A2 : AQUAPANEL Maxi Screw SB 25 / SB 39 (with drill point)

This annex applies to the product described in the main body of the UK Technical Assessment.



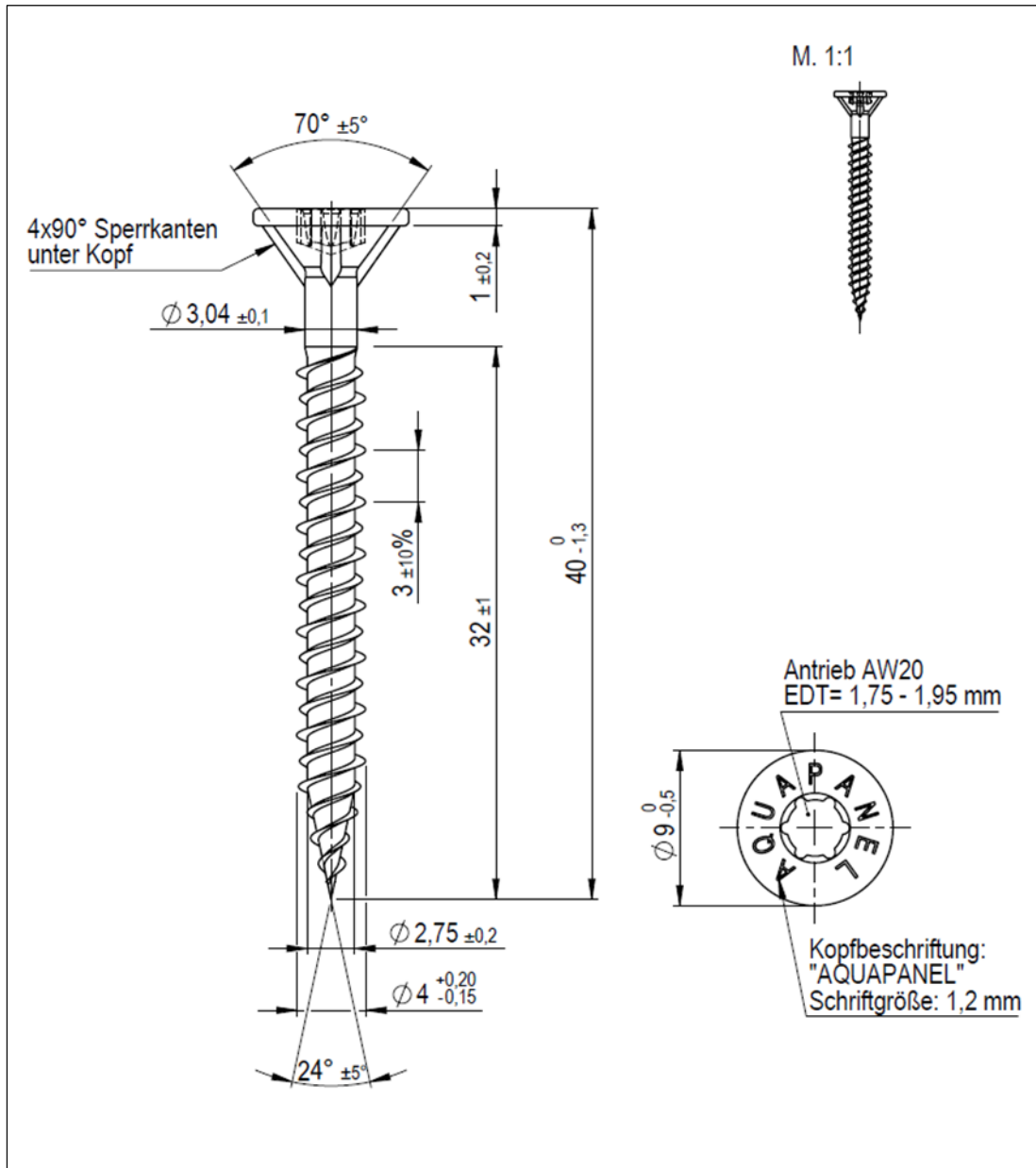
	SB 25	SB 39
Screw length [mm]	25	39

Material: C 22 (similar to Ck22 / Cm22)
 Material No.: SAE 1022 (similar to 1.1151 / 1.1149 acc. to EN 10083-2)

Dimensions in mm; without scale

ANNEX A3 : AQUAPANEL Rustproofed Screw SN 40 (with needlepoint)

This annex applies to the product described in the main body of the UK Technical Assessment.



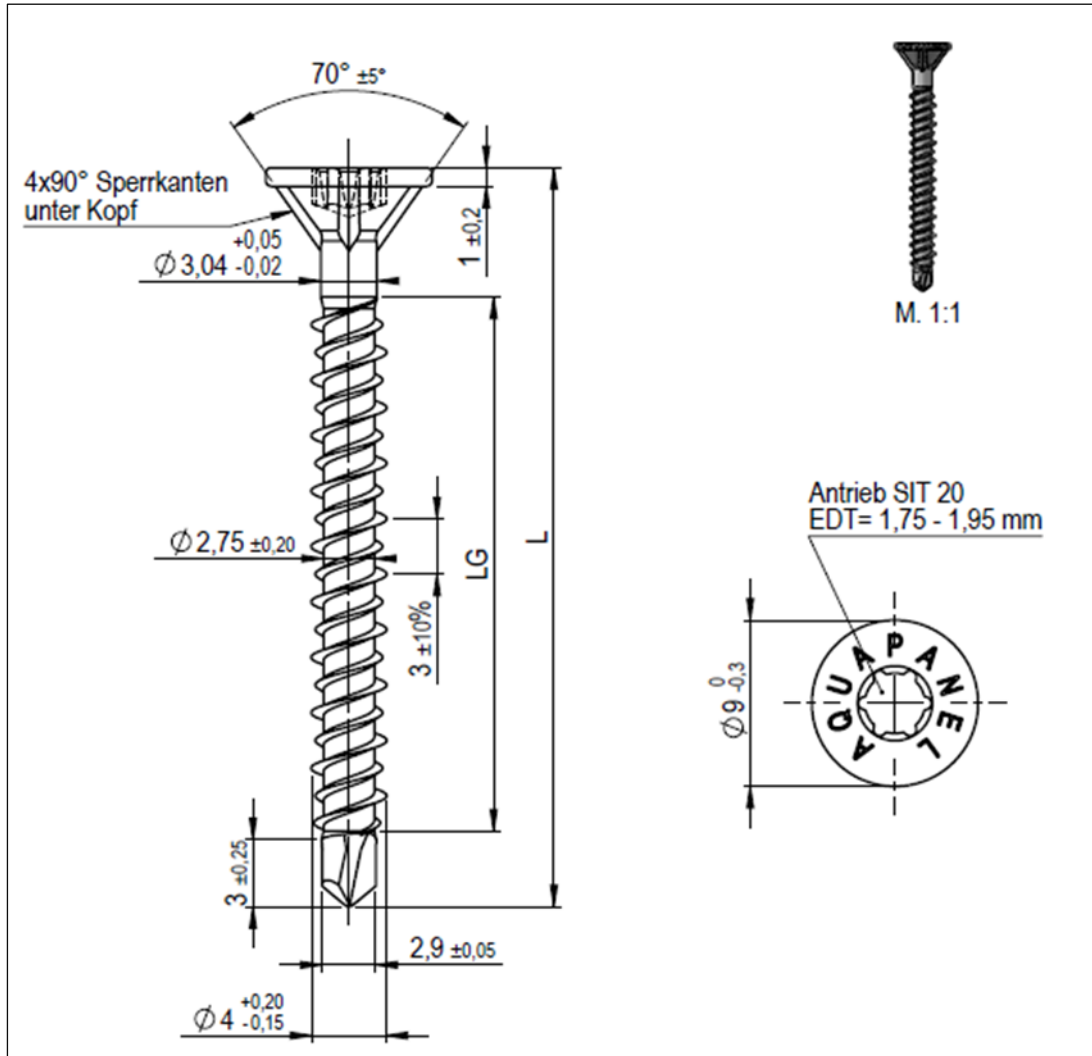
	SN 40
Screw length [mm]	40

Material: stainless steel (X3CrNiCu18-9-4)
 Material No.: 1.4567 according to EN 10088-3

Dimensions in mm; without scale

ANNEX A4 : AQUAPANEL Rustproofed Screw SB 25 / SB 40 (with drill point)

This annex applies to the product described in the main body of the UK Technical Assessment.



	SB 25	SB 40
Screw length [mm]	25	40

Material: stainless steel (X3CrNiCu18-9-4)
 Material No.: 1.4567 according to EN 10088-3

Dimensions in mm; without scale

ANNEX B1 : SPECIFICATION FOR USE

This annex applies to the product described in the main body of the UK Technical Assessment.

Specification of the intended use

Cement Bonded Board subject to non-structural applications

- lining of building components in outdoor areas
- for manufacturing of floor construction

Use conditions

Cement bonded board

Category B acc. to EN 12467:	Boards which are intended for applications where they may be subjected to heat, moisture and occasional frost, e.g. where they are either protected from or not subjected to severe weathering conditions.
Category C acc. to EN 12467:	Boards which are intended for internal applications, where they may be subjected to heat and moisture, but not to frost.
Category D acc. to EN 12467:	Boards for rigid underlayer applications.

Fasteners

- Structures subject to external atmospheric exposure (including industrial and marine environment) and to permanently damp internal condition, if no particular aggressive conditions exist (stainless steel)

Note: Particular aggressive conditions are e.g. permanent, alternating immersion in seawater or the splash zone of seawater, chloride atmosphere of indoor swimming pools or atmosphere with extreme chemical pollution (e.g. in desulphurization plant or road tunnels where de-icing materials are used)

The fasteners according to Annex A1 and Annex A2 can be used for external applications if the screw head is permanent sealed after the installation against moisture. The fasteners according to Annex A3 and Annex A4 can be used for external applications.

ANNEX B2 : INSTALLATION

This annex applies to the product described in the main body of the UK Technical Assessment.

During transport and storage the cement bonded board AQUAPANEL Cement Board Outdoor and the components manufactured by using these boards shall be protected against damaging and inadequate moisture, e.g. from precipitation or high building moisture (e.g. covering the boards or the components on all sides with foil to avoid standing water).

Damaged cement bonded boards AQUAPANEL Cement Board Outdoor or components manufactured by using these boards may neither be used nor installed.

If cement bonded board AQUAPANEL Cement Board Outdoor is processed on site (on-site fabrication), the moisture of the timber substructure may not detrimentally increase until installing the boards (protection from precipitation or high building moisture).

As connecting devices of the cement bonded board AQUAPANEL Cement Board Outdoor to the substructure appropriate screws with adequate corrosion protection shall be used, see Annex A1 to Annex A4.

For use of the cement bonded board in direct exposure a suitable protection against weathering shall be added e.g. render system consisting of an undercoat plaster and finishing plaster coat that is not part of this assessment.

The maximum permitted distance of the fasteners is 220 mm.

Expansion joints are placed minimum all 15 m.

For the installation of the cement bonded board AQUAPANEL Cement Board Outdoor the information of the manufacturer (instructions for installation) shall be considered.

ANNEX C : DIMENSIONS

This annex applies to the product described in the main body of the UK Technical Assessment.

Table C1: Nominal length of the cement bonded board AQUAPANEL Cement Board Outdoor

nominal length	length (target value)	tolerance
mm	mm	mm
≤ 3000	nominal length – 3	900 ≤ l ≤ 1000:
		Δ l = ± 3
		1000 ≤ l ≤ 1000:
		Δ l = ± 3 % x l
		L ≥ 1600:
		Δ l = ± 5

Table C2: Nominal width of the cement bonded board AQUAPANEL Cement Board Outdoor

nominal width	length (target value)	tolerance
mm	mm	mm
900	897	Δ l = ± 3
1200	1197	Δ l = ± 3,6
1250	1247	Δ l = ± 3,7



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