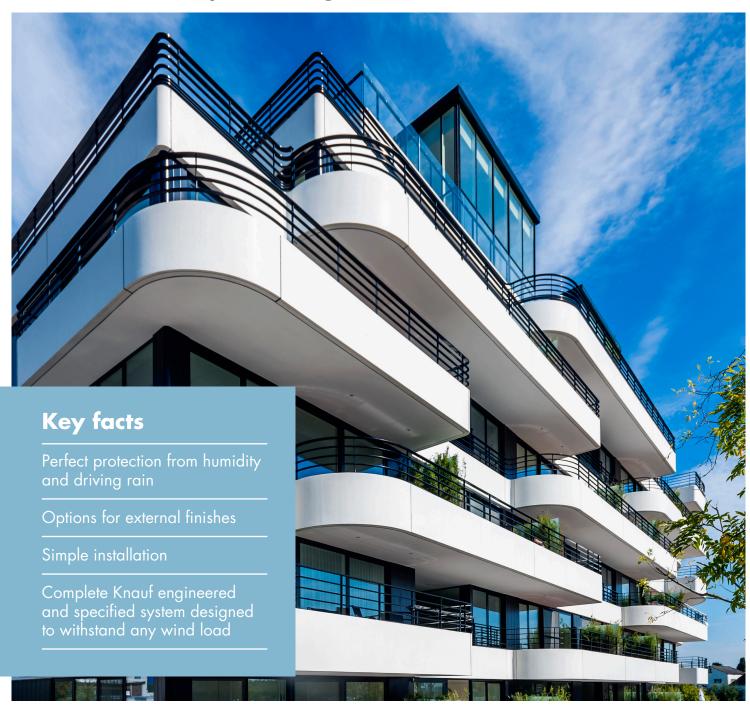


Knauf AQUAPANEL® Exterior Ceiling System

For soffits and exposed ceilings





A world leader in building materials, Knauf's commitment to innovation, quality and service provides effective solutions for the construction industry.

The Knauf AQUAPANEL® Exterior Ceiling System provides a cost effective complete system with the highest standards in design, installation and sustainability.

Ideal for use on exterior ceiling areas such as soffits, balconies, underpasses and underground car parks, Knauf AQUAPANEL® Exterior Ceiling System prevents damage from water, providing perfect protection from the effects of weather, moisture and mildew.

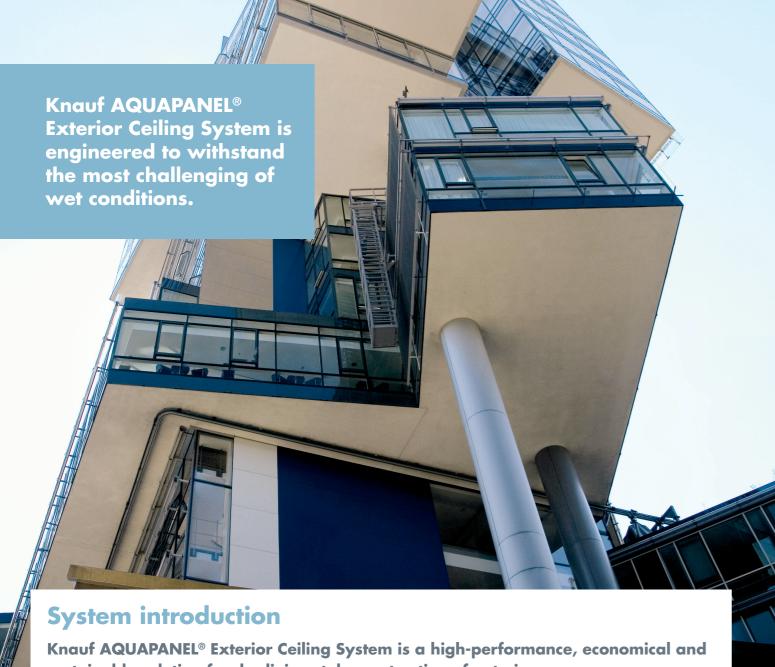
From spectacularly large and impressive ceiling surfaces to round, organic shapes, these lightweight, resilient and easy to install materials ensure quality and durability.

Meaning you can specify Knauf AQUAPANEL® Exterior Ceiling System with confidence.



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sustainable solution for dry lining style construction of exteriors.

From external soffits, underpasses or open and underground car parks to exterior ceilings, our solutions are engineered to withstand the most challenging wet conditions.

Perfect protection against high humidity and chemicals

Knauf AQUAPANEL® Exterior Ceiling System is the perfect solution for ceilings exposed to moisture, wind loading and coastal environments. All components are designed and tested to achieve the highest performance

Knauf AQUAPANEL® Cement Boards are water-resistant and made of inorganic materials, which prevents mildew from forming and spreading.

Our range of coated suspended ceiling structures is available in both a C3 or C5 class of corrosion resistance. This ensures the system is suitable for outdoor areas from urban and industrial atmospheres, with moderate sulphur dioxide pollution to coastal areas with associated salinity.

And finally, the complete system can be specified to withstand any UK based wind load.

Options for external finishes

Knauf External Renders can be specified as a finish coat, offering options for texture and colours.

Simple installation

The combination of lightweight materials and the simplicity of installation makes the overhead work easier and faster.

Complete Knauf engineered and specified system with one single point of contact

Our team of Project Specification Managers and Area Sales Managers will provide you with support throughout the project; from reviewing the architect's drawings and wind load calculations at the very early stage so that the initial specification can be created, to regular visits on site to ensure optimum system performance.

Working with our team of specialists will guarantee you the highest standards in design, construction, cost-effectiveness and durability.

External soffits and ceilings

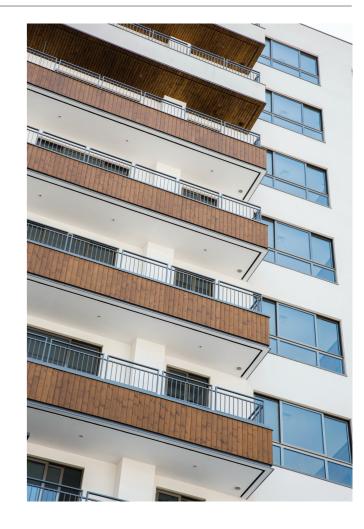
Benefits

- Simple installation
- Resistant to moisture and driving rain
- Mildew-resistant
- Stable, robust and durable
- Creative design opportunities
- Options for the creation of curved ceilings
- Spectacular ceilings thanks to expansion joints that are only needed every 15m and enable a 225m² closed area without a visible joint*
- Large choice of colours, textures and finishes with our Knauf External Render Systems

Ideal dry lining solution for exterior ceilings such as soffits, undersides of balconies, underpasses and underground car parks. This eliminates any risk of moisture or mildew forming and spreading.

With Knauf AQUAPANEL® Exterior Ceiling Systems, exterior ceilings are optimally protected against all types of weather effects, regardless of their location.

*A movement joint must be installed if there is a movement joint in the structure above.





Renal Coated Nonius Top Knoul Coated Nonius Hanger Knoul Coated Nonius Hanger Knoul Coated Nonius Hanger Knoul Coated 'C' Channel Intersection Connector Centres to sult specification Sent Skylline for Knoul Coated 'C' Channel Knoul AQUAPANEL® Eggs Knoul AQUAPANEL® Eggs Knoul Knoul Formation of works Knoul Knoul Knoul Coated 'C' Channel Knoul Knou

Refer to Knauf Technical or the Knauf Project Specification for clarification on whether C3 or C5 metal should be used.

System component details

Knauf Coated 'C' Channel

Coated steel section for use as support channel for Knauf AQUAPANEL® Ceiling system.



Coating		Dimensions (mm)			Material No.	Pack	Details
	Gauge	Size/webb	Length	Flange		Items/Pack	Kg (Approx.)
C3	0.60	60	4000	27	57983	12	27
C3	0.60	60	cut to order	27	322198 ^{CF}	12	-
C5	0.60	60	4000	27	322196	12	27
C5	0.60	60	cut to order	27	322197 ^{CF}	12	_

Compliance: EN 13964:2014

Knauf Coated 'U' Channel

Coated steel section for use as perimeter channel in Knauf AQUAPANEL® Ceiling system.



Coating	Dimensions (mm)		Material No.	Pack	Details		
	Gauge	Size/webb	Length	Flange		Items/Pack	Kg (Approx.)
C3	0.60	28	3000	27	59877	16	18
C5	0.60	28	3000	27	322228	16	18

Compliance: EN 13964:2014

Knauf Coated Nonius Hanger

Coated suspending brackets for use in Knauf AQUAPANEL® Ceiling system.

Coating	Material No.	Dimensions (mm)	Pack Details	
		Length	Items/Pack	Kg (Approx.)
C3	157088	100	50	2
C5	322195	100	50	2

Compliance: EN 13964:2014



Knauf Coated Nonius Top

Coated suspending brackets for use in Knauf AQUAPANEL® Ceiling system.

Coating	Dimensions (mm)	Material No.	Pack	Details
			Items/Pack	Kg (Approx.)
C3	147.5	61953	50	1.7
C3	245.0	61947	50	2.5
C3	342.5	61948	50	3.3
C3	440.0	61949	50	4.2
C3	537.5	61950	50	4.9
C3	635.0	61955	50	5.8
C3	732.5	61951	50	6.8
C3	830.0	61952	50	7.8
C3	927.5	61946	50	8.7
C3	1122.5	40401	50	10.5
C3	1415.0	97723	50	13.1
C3	1707.5	75063	50	15.0

Compliance: EN 13964:2014

System component details

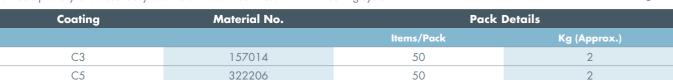
Knauf Coated Nonius Top (Continued)

	- ·			
Coating	Dimensions (mm)	Material No.	Pack	Details
			Items/Pack	Kg (Approx.)
C5	147.5	322210	50	1.7
C5	245.0	322211	50	2.5
C5	342.5	322212	50	3.3
C5	440.0	322213	50	4.2
C5	537.5	322214	50	4.9
C5	635.0	469042	50	5.8
C5	732.5	469069	50	6.8
C5	830.0	469070	50	7.8
C5	927.5	322215	50	8.7
C5	1122.5	322216	50	10.5
C5	1415.0	322217	50	13.1
C5	1707.5	322218	50	15.0

Compliance: EN 13964:2014

Knauf Coated 'C' Channel Intersection Connector

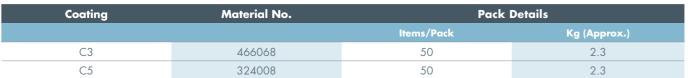
Connects primary and secondary channels in the Knauf AQUAPANEL® Ceiling system.



Compliance: EN 13964:2014

Knauf Coated 'C' Channel Connector

Connects base and support profiles in the Knauf AQUAPANEL® Ceiling system.



Compliance: EN 13964:2014

Knauf Coated 'U' Mounting Bracket

Locates Knauf 'C' Channel to background support.

Coating	Dimensions (mm)			Material No.	Pack I	Details
	Size/webb	Length	Flange		Items/Pack	Kg (Approx.)
C3	60	120	27	322021	50	3
C3	60	200	27	323977	50	4
C5	60	120	27	322018	50	3
C5	60	200	27	323996	50	4

Compliance: EN 13964:2014

Knauf Nonius Clip

Clip for use in combination with the Knauf Coated Nonius Top for adjustment of ceiling heights. Knauf Coated Nonius Clips, once installed, should be touched up with Corrosion Resistant Paint where the coating is removed. If using uncoated Nonius Clips, the entire clip must be coated with Corrosion Resistant Paint after installation.



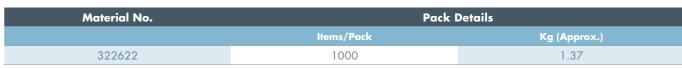
Coating	Material No.	Pack I	Details
		Items/Pack	Kg (Approx.)
C3	591247	100	0.7
C5	591249	100	0.7
Uncoated	591252	100	0.7

Compliance: EN 13964:2014

System component details

Knauf Blackstar Screws TN 3.5 25

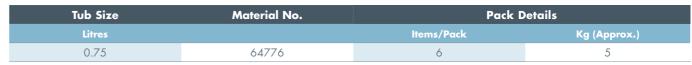
Secure Knauf Coated Nonius Hanger to Knauf Coated 'C' Channel. Must be painted with Corrosion Resistant Paint when installed.



Compliance: EN 13964:2014

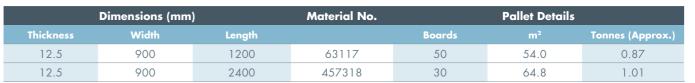
Corrosion Resistant Paint

Corrosion resistant paint for use in the Knauf AQUAPANEL® Interior and Exterior Ceiling Systems.



Knauf AQUAPANEL® Cement Board Outdoor

Knauf AQUAPANEL® Cement Board Outdoor is a tough cement board for exterior use and is designed for use as a render carrier in Knauf systems.



Compliance: ETA-07/0173.

Knauf AQUAPANEL® Cement Board SkyLite

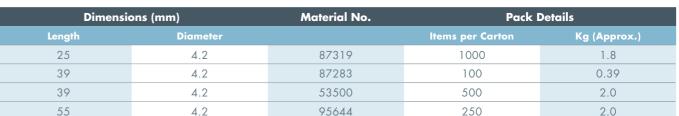
Knauf AQUAPANEL® Cement Board SkyLite is a lightweight 8mm cement board suitable for interior ceilings in wet and humid areas as well as some exterior soffits dependent on specification.



Compliance: ETA-13/0608.

Knauf AQUAPANEL® Maxi Screws (SN)

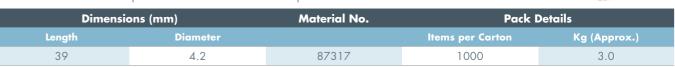
Corrosion protected screws for fixing Knauf AQUAPANEL® to light gauge steel profiles up to 0.7mm. They have a needle point and countersunk heads.



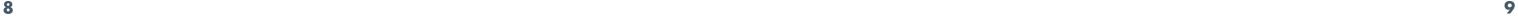
Compliance: EN 14566.

Knauf AQUAPANEL® Maxi Screws (SN) Collated

Collated 39mm screws. Each pack has 10 belts with 100 screws per belt.



Compliance: EN 14566.



System component details

Knauf AQUAPANEL® Tape

Knauf AQUAPANEL® Tape is a 100mm wide, glass fibre tape with an alkaline-resistant coating. It is embedded into Knauf AQUAPANEL® Joint Filler - Grey to reinforce joints as part of a Knauf AQUAPANEL® Exterior system.



Roll Size		Material No.	Carton Details		
	Length (m)	Width (mm)		Rolls per Carton	Kg (Approx.)
	50	100	429471	12	4

Estimating Guide: 2.1 m/m²

Knauf AQUAPANEL® Joint Filler - Grey

Knauf AQUAPANEL® Joint Filler - Grey is a cement-based material for filling joints and embedding Knauf AQUAPANEL® Tape and Knauf AQUAPANEL® Reinforcing Mesh as part of the Knauf AQUAPANEL® Exterior and Interior Ceiling systems.



Bag Size	e Material No. Pall		Details
Kg		Bags	Tonnes (Approx.)
20	131094	48	0.96

Estimating Guide: One bag will cover approximately $28\,\text{m}^2$. Compliance: EN 998-1:2016.

Knauf SM700 Pro

Knauf SM700 Pro is a white mineral adhesive and reinforcing basecoat mortar, for the use on Knauf Warm Wall Systems. Knauf SM700 Pro offers increased high strength adhesion, through additional fibre content and is suitable as a reinforcing coat for EPS and mineral fibre insulation boards. Knauf SM700 Pro can also be used as a reinforcing basecoat for masonry and cement carrier board substrates.



Bag Size Material No.		Pallet Details	
Kg		Bags	Tonnes (Approx.)
25	164930	42	1.05

Compliance: BS EN 998-1. Shelf Life: 12 Months. Estimated Coverage: 6.2m² a bag adhesive, 3.6m² a bag at 5mm.

Knauf Reinforcing Mesh

A polymer coated glassfibre reinforcing mesh, for Knauf Warm Wall and Render Only systems.



Туре		Dimensions (m)	Material No.
	Lengtl	n Width	
Std	50	1	49210
HD	50	1	15229

Estimated Coverage: 45m² per roll with laps.

Knauf Quarzgrund Pro

Knauf Quarzgrund Pro is a ready mixed bonding primer, which can be used on cement carrier boards before the application of basecoats such as Knauf SM700 and Knauf SM700 Pro. It can also be used as a bonding primer to go on top of Knauf basecoats before the application of the finishing coat such as Knauf Noblo, MineralAktiv, Conni and Addi. Knauf Quarzgrund Pro is available in a range of colours to complement the chosen finishing coat.



Туре	Tub Size	Material No.
	Kg	
White Price Group I	15	479779 ^{CF}
Colour Price Group II	15	479782 ^{CF}
Colour Price Group III	15	479782 ^{CF}
Colour Price Group IV	15	479782 ^{CF}

Shelf Life: 18 Months. Estimated Coverage: 90m² per tub.

System component details

Knauf Conni S

Knauf Conni S is a ready-mixed silicone based texture finished top coat, available in a range of grain sizes and colours, for use over Knauf Basecoats.



Туре	Grain Size	Tub Size	Material No.
	mm	Kg	
White Price Group I	1.0 1.5 2.0 3.0	25 25 25 25	537542 537543 537544 537545
Colour Price Group II	1.0 1.5 2.0 3.0	25 25 25 25 25	477772 ^c F 477773 ^c F 44794 ^c F 477774 ^c F
Colour Price Group III	1.0 1.5 2.0 3.0	25 25 25 25	477772 ^{cf} 477773 ^{cf} 44794 ^{cf} 477774 ^{cf}
Colour Price Group IV	1.0 1.5 2.0 3.0	25 25 25 25	477772 ^{cf} 477773 ^{cf} 44794 ^{cf} 477774 ^{cf}

Compliance: BS EN 15824 Shelf Life: 24 Months

Estimated Coverage: 1.0mm - 15.6m² per tub , 1.5mm 11.36 m² a tub, 2mm 8.92 m² a tub, 3mm 6.75 m² a tub.

Knauf Addi S

Knauf Addi S is a ready-mixed organic based texture finished top coat, available in a range of grain sizes and colours, for use over Knauf Basecoats.



Туре	Grain Size	Tub Size	Material No.	Pallet	Pallet Details	
	mm	Kg		Tubs	Tonnes	
White Price Group I	1.5	25	537532	24	0.6	
Colour Price Group II	1.5	25	44798 ^{CF}	24	0.6	
Colour Price Group III	1.5	25	44798 ^{CF}	24	0.6	
Colour Price Group IV	1.5	25	44798 ^{CF}	24	0.6	

Compliance: BS EN 15824 Shelf Life: 24 Months Estimated Coverage: 1.5mm 11.36m² a tub.

Knauf MineralAktiv

Knauf MineralAktiv is a ready-mixed, biocide-free top coat formulated for advanced protection against algae and fungi. It is available in 1.5mm grain as standard and in over 230 colours. For use over Knauf Basecoats and suitable for application in air temperatures ranging from 8°C to 30°C.



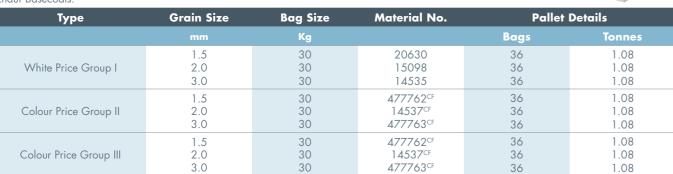
Туре	Grain Size	Tub Size	Material No.	Pallet	Pallet Details	
	mm	Kg		Tubs	Tonnes	
White Price Group I	1.5	25	525684	24	0.6	
Colour Price Group II	1.5	25	525688 ^{CF}	24	0.6	
Colour Price Group III	1.5	25	525688 ^{CF}	24	0.6	
Colour Price Group IV	1.5	25	525688 ^{CF}	24	0.6	

Compliance: BS EN 15824 Shelf Life: 18 Months Estimated Coverage: 1.5mm 10.4m² a tub.

System component details

Knauf Noblo

Knauf Noblo is a mineral based top coat, available in a range of grain sizes and colours, for use over Knauf Basecoats.



Compliance: BS EN 998-1 Shelf Life: 6 Months Estimated Coverage: $1.5 \, \text{mm} \, 13.0 \, \text{m}^2$ a bag, $2 \, \text{mm} \, 10 \, \text{m}^2$ a bag, $3 \, \text{mm} \, 8.1 \, \text{m}^2$ a bag.

Options for external finishes

A wide range of surface finishes can be achieved with our Knauf External Render Systems.

Contact Knauf for more information about Knauf External Renders.





The Knauf AQUAPANEL® Exterior Ceiling System must be installed in accordance with Knauf recommendations and in accordance with BS: 8000-0:2014.

Any cut, chipped or exposed edged metalwork should be painted with our Corrosion Resistant Paint. All installed Blackstar screws should also be fully coated with our Corrosion Resistant Paint.

1. Perimeter

Knauf Coated 'U' Channel – Perimeter Support forms the perimeter of the ceiling. Channels should be installed at required heights and fixings* should be installed at maximum 600mm centres and 50mm centres from ends of channels. Where ceiling runs exceed the Perimeter Support Channels length, additional channels should be installed and butted together to continue the run.

2 & 3. Suspension

When creating a shallow void, Knauf Coated 'U' Mounting Bracket can be used. For drops less than 150mm, use the 'U' Mounting Bracket to secure the upper channel. Screw and securely fix the 'U' Mounting Bracket into the superstructure using appropriate fixings* which are designed to take the required loadings. These are to be fixed at maximum dimensions as per project specification and allow for measurement of the channel to the required depth on the bracket. Once the required measurement is located, screw the channel into the bracket using two Knauf Blackstar Screws TN 3.5 25, which should subsequently be coated with corrosion resistant paint.

For greater void depths Knauf Coated Nonius Hangers in combination with Knauf Coated Nonius Tops should be used. The connection of Knauf Coated Nonius Hangers with Knauf Coated Nonius Tops is fixed using two Knauf Nonius Clips and should be fully engaged. Knauf Coated Nonius Clips, once installed, should be touched up with Corrosion Resistant Paint where the coating is removed. If using uncoated Nonius Clips, the entire clip must be coated with Corrosion Resistant Paint after installation. The suspension hangers should be installed at maximum dimensions as per project specification to the superstructure using appropriate fixings* which are designed to take the required loadings.

4. Upper Channels

The Knauf Coated 'C' Channels are located at maximum dimensions as per project specification. Hangers should be mechanically clipped and screwed to Knauf Coated 'C' Channel using Knauf Blackstar Screws TN 3.5 25, which should subsequently be coated with corrosion resistant paint. The Knauf Coated 'C' Channels should lie on top of the upper flange of the Knauf Coated 'U' Channel – Perimeter Support.

5, 6 & 7. Lower Channels

The Knauf Coated 'C' Channels are located maximum 300mm centres within the perimeter channel, to coincide with the abutments of the Knauf AQUAPANEL® Cement Board SkyLite, which will be fixed later. The upper and lower Knauf Coated 'C' Channels are connected using Knauf Coated Channel Intersection Connectors. The connectors ensure positioning is maintained throughout the ceiling. Connectors fit over the upper channels and snap fix into the lower channels.

When ceilings exceed 4m, a Knauf Coated Channel Connector is required between 'C' Channels.

The Coated Channel Connector is friction fit between the channels.

All dimensions are supplied as per project specific needs based on wind loads, drops and weight supported by the frame; all framework and hangers should be engineered to suit the location. Contact Knauf to confirm frame layout.

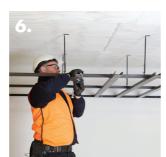














* fixings supplied by other manufacturers

Installation

Movement Control Joints

Movement control joints should be created within the system when runs of ceiling exceed 15m, as well as coinciding with existing movement joints in the surrounding structure.

8. Board Preparation

Knauf AQUAPANEL® Cement Board Skylite (or Knauf AQUAPANEL® Cement Board Outdoor dependent on wind load and specification) can be easily and accurately cut using a coarse bladed saw, or by simply scoring and snapping.

Score one side with a sharp knife, cutting through the mesh. Snap the board along the score, and then cut through the mesh on the other side. Smooth any rough areas caused by scoring with a rasp.

9. Fixing Board

Apply Knauf AQUAPANEL® Cement Board Skylite to lower 'C' Channels which are at maximum 300mm centres. Ensure there is a gap of 3 – 5mm between the boards and that the members are central behind both boards.

Use Knauf AQUAPANEL® Maxi Screws SN25 to fix the Knauf AQUAPANEL® Cement Board Skylite to the metal 'C' Channels.

Screws should be at least 15mm in from the edge of Knauf AQUAPANEL® Cement Boards and spaced at maximum 200mm centres. Screws should not be over tightened.

10 & 11. Reinforcing Joints

All cement board joints should be filled with Knauf AQUAPANEL® Joint Filler – Grey and Knauf AQUAPANEL® Tape.

All screw heads should be covered with Knauf AQUAPANEL® Joint Filler – Grey.

12. Basecoat layer

Apply Knauf SM700 Pro with a stainless steel trowel or suitable spray machine, to a thickness of 5mm and level out using a notched trowel.

Apply mesh reinforcing as below. Remove any burrs as the render begins to harden.

13. Mesh Reinforcement

Apply Knauf Reinforcing Mesh to the whole surface of the board, whilst the basecoat is still wet. Trowel the mesh into the surface, leaving it just below the surface of the render and level out. Ensure that the mesh overlaps by a minimum of 100mm. At openings additional mesh is required. This will consist of an extra layer of reinforcement mesh, creating "stress patches". 250mm x 250mm mesh sections are positioned at 45 degrees to the corners of the openings, and each roll has details of positions as required.

14. Secondary Basecoat

A second base coat of Knauf SM700 Pro should be applied after the reinforcing layer has been left to dry for a minimum of 24 hours. The second base layer should be applied to a thickness of 2 – 3mm.

The second base layer should be rubbed up after initial cure to achieve a sand papery texture. Leave for up to 7 days before continuing work.

15. Render Finish

To prevent staining of the finish coat ensure all scaffold boards are free from dirt before application of the finishing coat. Onto dry Knauf SM700 Pro apply Knauf Quarzgrund Pro primer, before application of the top coat and allow drying time.

Once Knauf Quarzgrund Pro primer has fully dried, apply Knauf Conni S to the thickness of the grain with a stainless steel trowel and texture with a plastic trowel. Always work to a wet edge therefore eliminating texture changes at different levels.



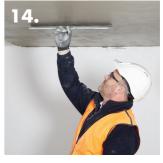






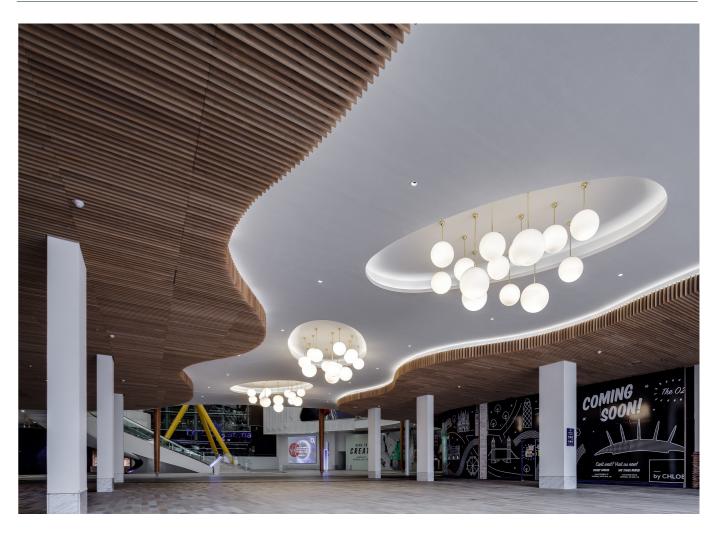












ICON Outlet at The O2, London

Complete Knauf Semi-Exposed Soffit System Specified in New London Designer Outlet.

Knauf UK has specified, designed and supplied a complete Knauf AQUAPANEL® Exterior Soffit system for a brand-new luxury shopping destination at The O2 in London.

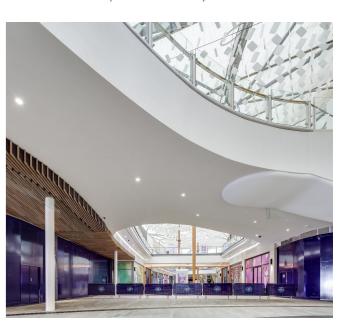
ICON Outlet at The O2 is a 210,000 square foot designer outlet shopping centre that complements the world's busiest entertainment complex, which remained open to visitors throughout the works. The site was made even more challenging as The O2 sits directly next to the River Thames.

This led to the decision to specify the complete Knauf AQUAPANEL® Exterior Ceiling System, incorporating Knauf Coated Metal, Knauf AQUAPANEL® Cement Board SkyLite and accessories, and Knauf Render Dual Coat System (SM700 Pro, Reinforcing Mesh, Quarzgrund Pro and Conni S finish).

Matthew Mooney, Pre-Construction Director from Novo Facades explained: "The O2 is close to the River Thames so the architect treated the site as a marine environment due to the amount of moisture in the air.

We were worried about the risk of corrosion, but Knauf's AQUAPANEL® system has a coated metal grid so that was the main reason for choosing to specify Knauf.

"We are very happy with the products used – they were really easy to install and the process itself took just seven weeks. We had one minor issue, but one of the Knauf technical advisers came to site and showed our team how to install the product correctly."





Richard Lord, Knauf Technical Development Manager - AQUAPANEL®, added: "Knauf was introduced to the project by the façade and soffit contractor, Novo Facades, in the summer of 2017, where we worked together to create the specification and design for submission into the package sub contractor Lindner Group and main contractor ISG for approval.

Work started on site for the soffit system in late August 2018 and was completed before the zone opened to the public.

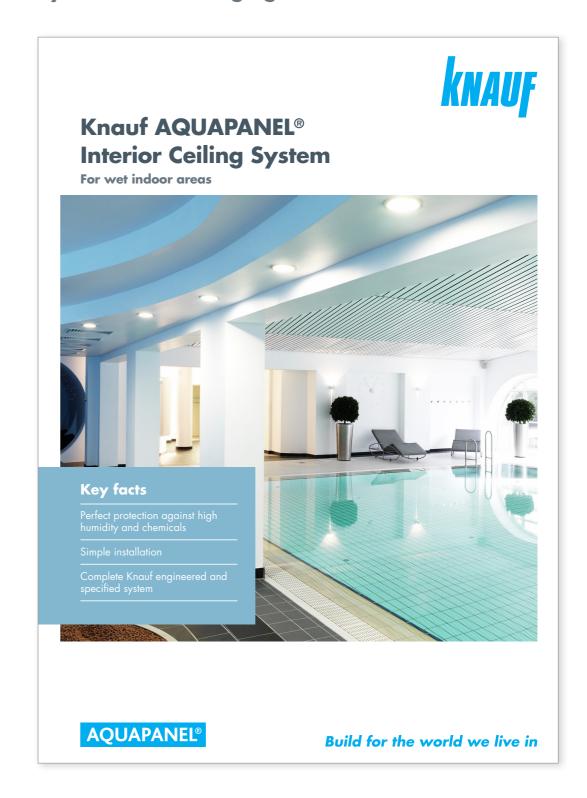
The ICON Outlet, a Joint Venture project between Crosstree Real Estate Partners and site owner AEG, is home to 80 luxury retail outlets including Hobbs, Karen Millen and Kurt Geiger.





Did you know...

We also offer an AQUAPANEL® Interior Ceiling System for challenging internal environments.



Download the brochure on our website, www.knauf.co.uk
Alternatively order a printed copy from our literature hotline.





Customer Service

UK Tel: 0800 521 050 Eire Tel: 01 4620739 Email: cservice@knauf.co.uk

Technical Service

UK Tel: 0800 030 4135 Eire Tel: 01 4620739 Email: technical@knauf.co.uk

Literature

UK Tel: 03700 613 700 Eire Tel: +44 3700 613 700



Website

www.knauf.co.uk www.knauf.ie

Knauf Kemsley Fields Business Park Sittingbourne Kent ME9 8SR

Knauf 87 Broomhill Road Tallaght Dublin 24

