



Cladseal

Facade Waterproofing, Air Sealing & Damp Proof Course Application



CladSeal

The complete system for water, weather and moisture protection and air sealing of facades, windows and masonry walls

During its lifetime a building facade is subject to the effects of thermal and structural movements as well as wind and water, all under a wide range of temperatures and climatic conditions. These stresses and movements subject the waterproofing to a range of demands: it needs to be strong, elastic, weatherproof and resistant to industrial, polluted atmosphere. It needs to give a service life as long as the life of the building, with no loss in performance or properties.

The Cladseal system provides an engineered waterproofing system meeting all these requirements.

The Cladseal Product

The EPDM and Butyl membranes, with their cross-linked molecular structure, have negligible aging over time, despite exposure to the atmosphere, sunlight, UV-radiation, chemical pollutions, water and extremes of temperature. EPDM and Butyl contain no plasticisers which can evaporate or be washed out over time or migrate to other materials. The strength and elasticity remains virtually unchanged over decades, without shrinkage, melting, hardening or cracking, and the membrane remains flexible at temperatures from -40 to +150°C.

EPDM has a proven service life, defined as minimum 150% elongation at break, exceeding 50 years in exposed installations. EPDM and Butyl are also highly resistant to chemicals and attacks by rodents, fungi, bacteria and micro-organisms. They are also resistant to water absorption. EPDM and Butyl can absorb thermal and structural movements during linear elongation up to 300% and have a multi-axial elongation exceeding 100%, at any temperature. Unlike most thermoplastic materials EPDM has no yield point, even when deformed to extreme limits it will still return to its original shape, size and thickness. Due to its viscoelastic properties it can withstand an almost unlimited pressure load.



Benefits of the Cladseal products

- **Weather resistant.** Resistant to atmosphere, UV light and airborne pollutions. Service life expectancy exceeds 50 years.
- **Temperature resistant.** Maintains its elasticity and extensibility irrespective of temperature.
- **Biological resistant.** Resistant to microbiological degradation, rodents, fungi and bacteria.
- **Elastic.** Can elongate over 300 %, with over 100 % multi dimensional elongation, and will always return to its original size and shape after elongation. Will therefore accommodate any thermal or structural movements in a building structure.
- **Proven history.** EPDM and Butyl membranes have been used for over 50 years in the building and civil engineering industry. The flexible membrane with the longest history.
- **Tough and puncture resistant.** Not affected by mechanical abuse, or extreme pressure loads.
- **Resistant to building materials.** EPDM and Butyl contain no plasticisers or additives that can migrate to other building materials and are compatible with any building substrates.
- **Chemical resistant.** EPDM or Butyl are not affected by other building materials, like mortar, cement, polystyrene, or acids.
- **Not affected by water.** EPDM and Butyl are completely unaffected by water and moisture, and absorb no measurable amount of water.
- **Environmental friendly products.** Contains no environmental pollutants. Can be re-cycled, burned or disposed without any effects on the environment.
- **An engineered Cladding system.** All components and a full range of technical solutions from one supplier.

Because of its stable molecular structure EPDM or Butyl does not affect other building materials or cause migration, staining or discoloration.

EPDM and Butyl has a low weight and a documented service life exceeding 50 years. It does not contain any CFCs, HCFCs, phthalates, dioxins, low grade hydrocarbons or other harmful chemicals. Because of this, a Life Cycle Assessment (LCA) is very favourable when compared to alternative products.

Butyl has similar properties as EPDM, combined with a extremely low water vapour permeability.

Comparison with thermoplastic materials

	EPDM & Butyl	Thermoplastic materials	
-40°C			At -40°C EPDM and Butyl are unaffected, thermoplastics are stiff, brittle.
+150°C			At +150°C EPDM and Butyl are unaffected, thermoplastics are liquids.
After elongation due to structural movements			After decades of flexing, EPDM and Butyl unaffected. Thermoplastics are thin and elongated, or cracked.

The Cladseal System

The Cladseal System incorporates a range of products giving full freedom in construction and application of the weather sealing attachment against the window frame and/or load carrying structures, both at the outside and the inside walls of the building. Sourcing all components from one supplier means compatible components and best possible logistics.

SealEco are able to offer four different membranes depending on which water vapour transmission factor the strip should have. Cladseal EXT for outside weatherproofing where a high vapour permeability is requested and Cladseal INT, Cladseal INT+ or Cladseal SA where a intermediate, low or extremely low vapour permeability is requested.

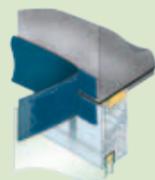
The diagram shows the different membranes in proportion to each other depending on the membranes thickness and μ -value:

		Cladseal INT		Cladseal INT+		Cladseal SA		
Cladseal EXT	μ -value	98000		300000		2000000		
	Thickness (mm)	1.0	1.2	0.75	1.0	1.6		
		sd-value (m)	98	117.6	225	300	3200	
	0.6	19.2	1/5	1/6	1/12	1/15.6	1/167	
	0.75	24	1/4	1/5	1/9.4	1/12.5	1/133	
	1.0	32	1/3	1/3.7	1/7	1/9.4	1/100	
	1.2	38.4	1/2.5	1/3	1/5.8	1/7.8	1/83	
1.5	48	1/2	1/2.5	1/4.7	1/6.25	1/67		

μ -value = Water vapour transmission factor

sd-value = Water vapour diffusion (m)*
* Equivalent air layer thickness

Cladseal can be fixed to any building substrate using the following Cladseal methods:



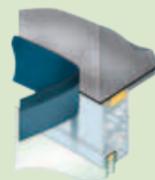
Adhered in separate contact adhesive
Cladseal EXT, Cladseal INT or Cladseal INT+ and Contact Adhesive 5000



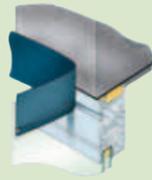
Adhered in separate high viscosity paste adhesive
Cladseal EXT, Cladseal INT or Cladseal INT+ and Paste Adhesive 3300



Reinforced membrane coated with self adhesive, sticky butyl (extremely high μ -value)
Cladseal SA



Cladseal EXT adhered with factory applied, self adhesive strips on one or two edges
Cladseal SA-Fix



Cladseal EXT mechanically fixed in a designed female groove, with factory applied extruded EPDM profile
Cladseal P-Fix

The Cladseal Service

To support and develop our customers is a key objective of the Cladseal Service. Our commitment to a "state-of-the-art" weather sealing package does not end with delivery of products to the building site. We remain your partner in providing individual engineered solutions, technical training and service in installation and construction, trouble shooting, development and logistics.

Construction and Installation Service

Our technical support team is available to offer advice on the installation, specification, application and suitability for a particular project of all Cladseal systems.

Our technical service engineers are also at your disposal for on-site training and advice and can provide information on the correct handling and techniques required to install the Cladseal systems.

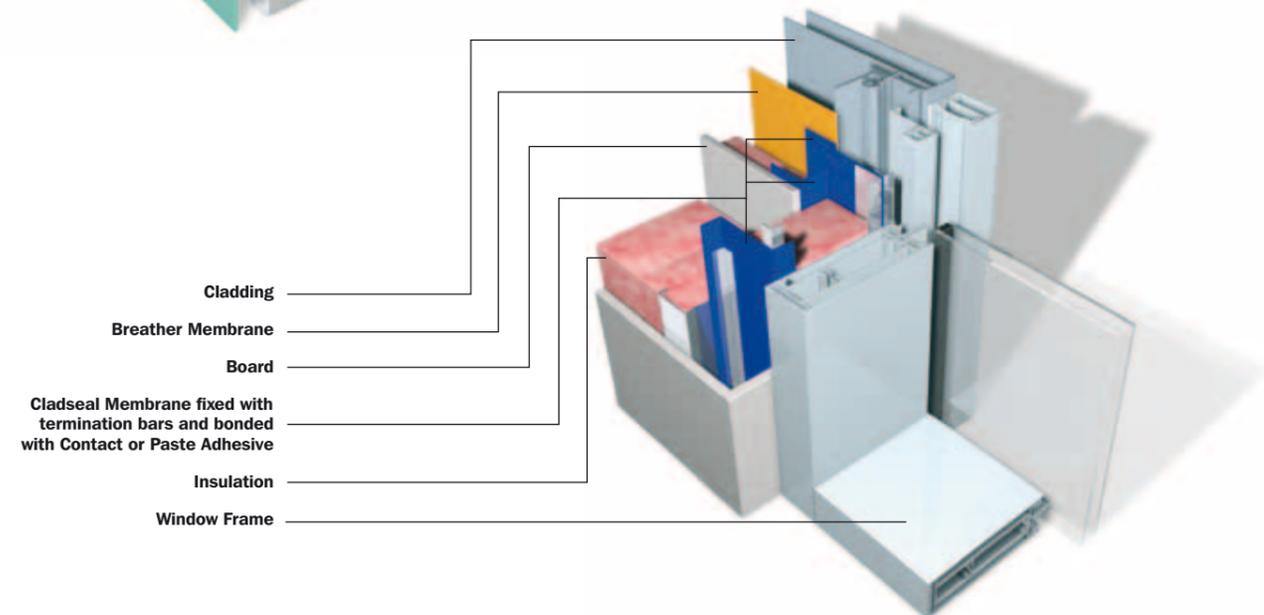
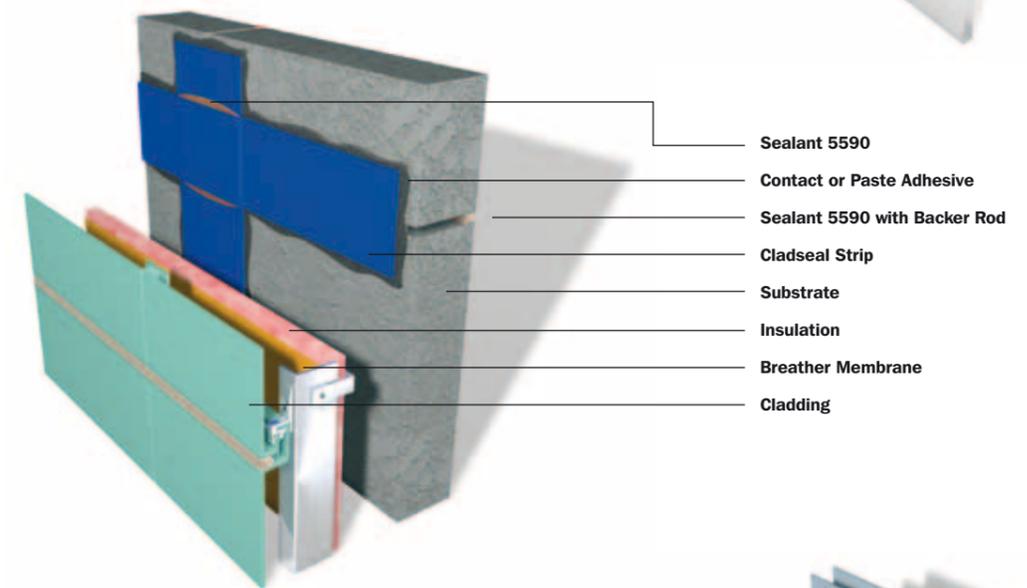
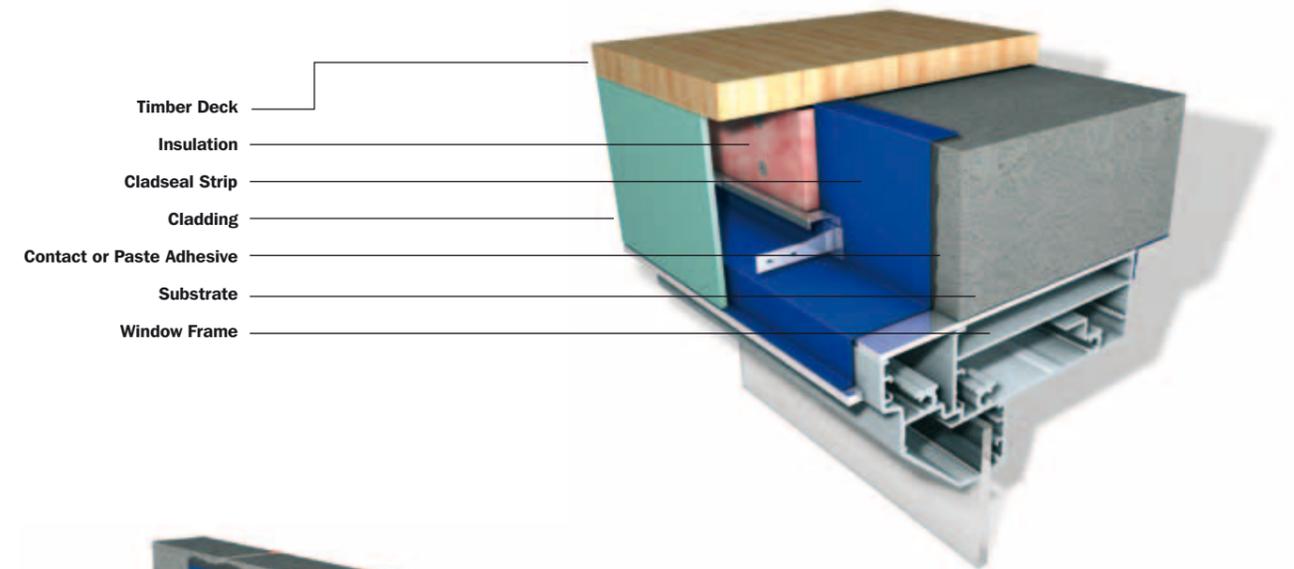
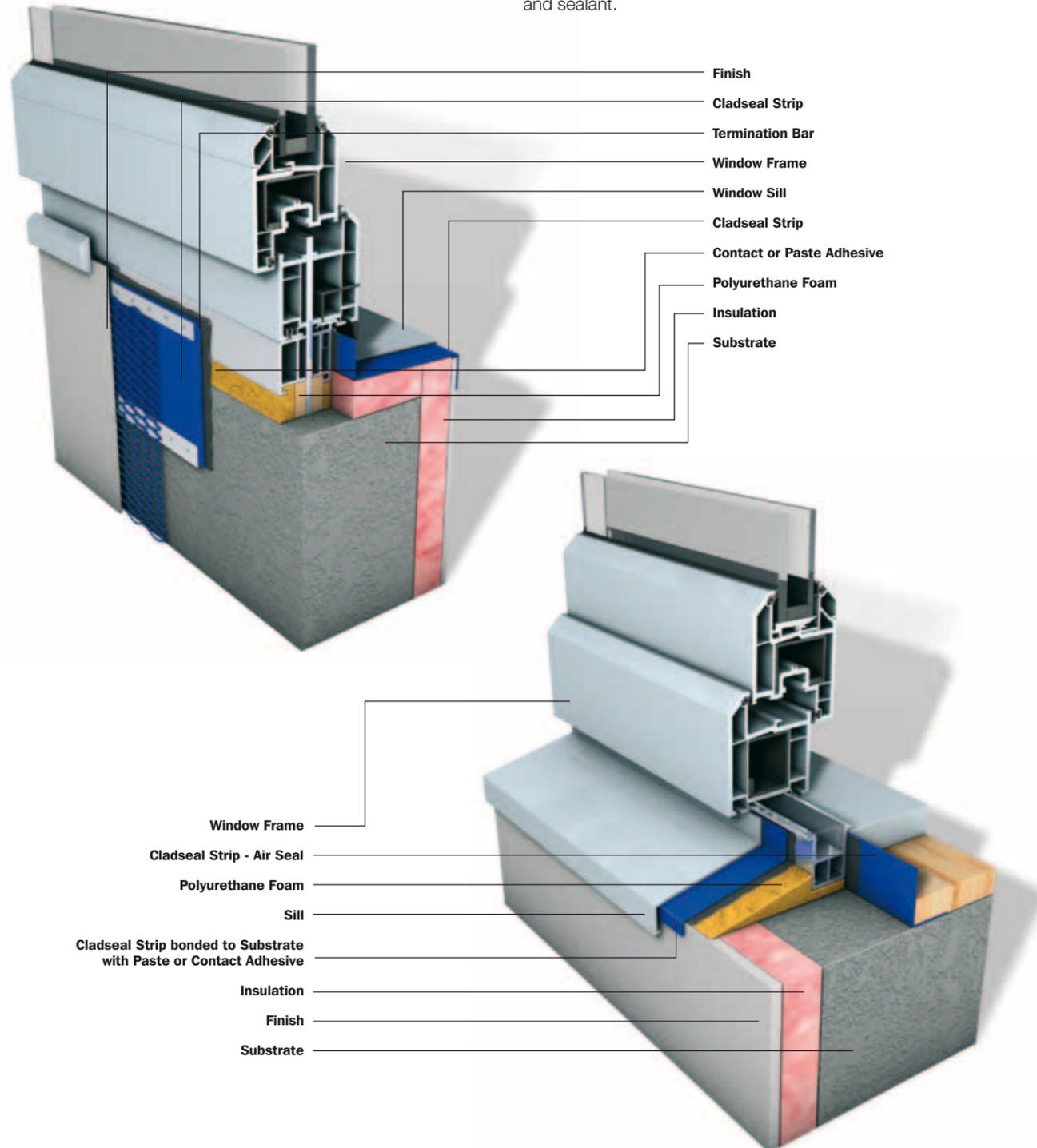


Area of use

The Cladseal System is the optimum material in the market to use for facade waterproofing, air sealing and damp proof course (often abbreviated to DPC). It is a complete system, which prevents rain and water from entering the buildings and prevents air leaks in the structure.

Window and cladding applications (weatherstrips and airseals)

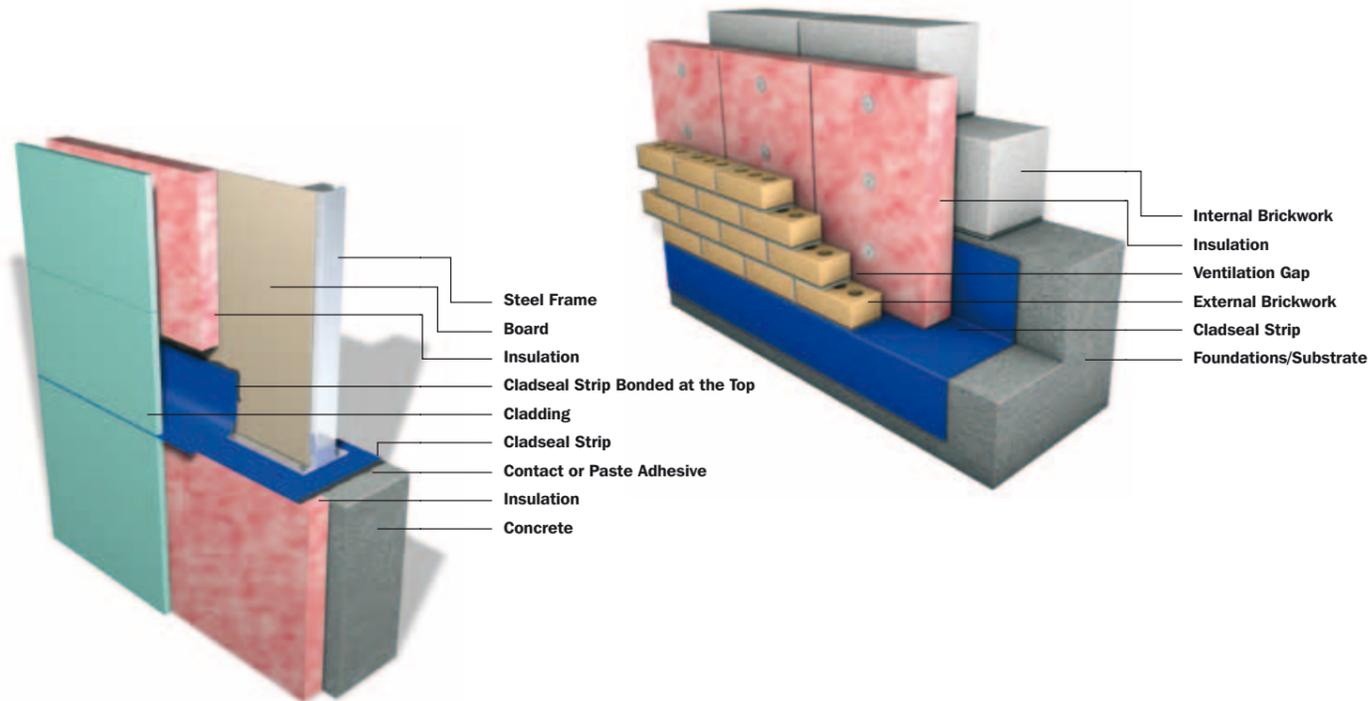
Many window and cladding systems require an external waterproof seal and internal air seal between the framework and substrate. The Cladseal System provides a continuous moisture barrier that can accommodate structural movement. Installation of the Cladseal membrane is a simple process using specially formulated primer, cleaner, adhesive and sealant.



Damp Proof Course Applications

The provision of a damp proof course has long been a requirement in construction. Brickwork and masonry must be protected from the damaging effects of water and moisture.

The Cladseal strip provides a continuous barrier of protection and its life expectancy is much longer than traditional materials. Installation of the Cladseal strip membrane is a simple process using specially formulated primer, cleaner, adhesive and sealant. Its exceptional elongation and weathering properties are perfect for a temperamental climate.



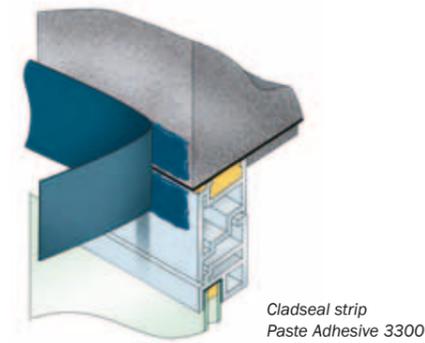
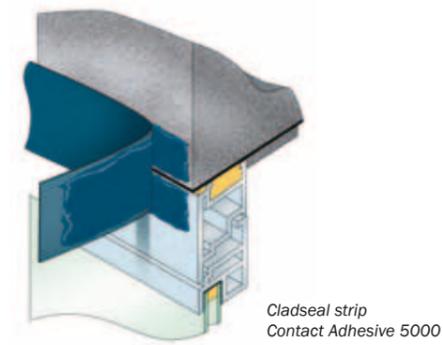
The Cladseal Installation

With five alternative application methods there is a suitable Cladseal solution to every facade, window or foundation construction and every type of substrate. The strips are available in any specified width from 50 mm up to 1700 mm to ensure the correct weatherproofing in any individual case.

Bonding surfaces have to be dry and clean. Overlap seams between strips have to be sealed with sealants and porous substrates have to be coated with a primer to provide a good bonding surface. All components that are necessary are included in the Cladseal System:

	Product type	Areas of use	Suitable substrates or surfaces
Paste Adhesive 3300	Polymer based high viscosity adhesive with low solvent content. Colour: black	One-side adhering of EPDM and Butyl to substrates. By using Paste Adhesive 3300 the position of the strip can be adjusted, where Contact Adhesive 5000 gives instant fixation.	Ridge PVC, Aluminium, Steel, Galvanised steel, Glass, Acrylic glass, Concrete, Light weight concrete, Lead, Wood, Bitumen, EPDM, Butyl
Contact Adhesive 5000	Polymer based contact adhesive containing inflammable solvents. Colour: black	Two-side adhering of EPDM and Butyl to substrates. Can also be used to splice EPDM or Butyl surfaces together, in combination with Sealant 5590.	Ridge PVC, Aluminium, Steel, Galvanised steel, Glass, Bitumen (not APP), Concrete, Light weight concrete, Wood, EPDM, Butyl
Sealant 5590	Silicone based sealant with low solvent content. Colour: black	Sealing of overlap seams, details and corners in all Cladseal Systems.	PVC, PE, Aluminium, Steel, Galvanised steel, Glass, Acrylic glass, EPDM, Butyl
Primer 9800	Solvent based primer, contains polymer. Highly inflammable. Colour: black	Treatment of absorbing or porous substrates before applying Cladseal strips glued with Paste Adhesive 3300 and Cladseal SA/SA-Fix.	Concrete, Light weight concrete, Stone, Perlite, Mineral boards.
Cleaning Wash 9700	Naphtha (Petroleum), hydrogen processed light. Highly inflammable. Colour: Black	Used on metal and Cladseal surfaces that are to accept adhesives which have been contaminated by oil-based products or excess dirt (note: on both mating surfaces in the case of Cladseal surfaces).	Hard PVC, Aluminium, Steel, Galvanised steel, Acrylic glass, Concrete, Light weight concrete, Lead, Wood, Bitumen, EPDM, Butyl

Everything you need



Cladseal INT

Cladseal INT is an elastomeric waterproofing strip based on the rubber polymer EPDM with an intermediate water vapour transmission factor. The product comes in black colour and has a surface texture on both sides for maximum adhesion.

Cladseal INT	
Thickness	1.0 / 1.2 mm
Length	25 m
Width	Specified, from 100 to 1700 mm
Water vapour transmission factor, μ - value	98000
Sd-value (1.0 mm)	98 m
Sd-value (1.2 mm)	117,6 m

Cladseal EXT

Cladseal EXT is an elastomeric waterproofing strip based on the rubber polymer EPDM with a low water vapour transmission factor. The product comes in black colour and has a surface texture on both sides for maximum adhesion.

Cladseal EXT	
Thickness	0.6 / 0.75 / 1.0 / 1.2 / 1.5 mm
Length	25 m
Width	Specified, from 100 to 1700 mm
Water vapour transmission factor, μ - value	32000
Sd-value (0,6 mm)	19.2 m
Sd-value (0,75 mm)	24 m
Sd-value (1.0 mm)	32 m
Sd-value (1.2 mm)	38.4 m
Sd-value (1.5 mm)	48 m

Cladseal INT+

Cladseal INT+ is an elastomeric waterproofing strip based on the rubber polymer Butyl with a high water vapour transmission factor. The product comes in black colour and has a surface texture on both sides for maximum adhesion.

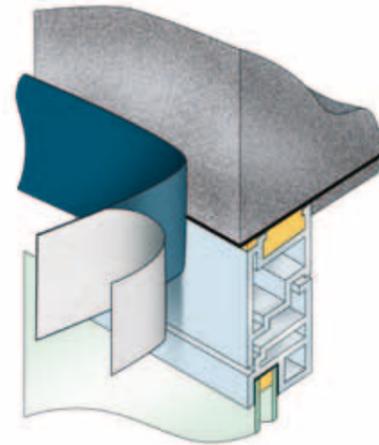
Cladseal INT+	
Thickness	0.75 / 1.0 mm
Length	25 m
Width	Specified, from 100 to 1700 mm
Water vapour transmission factor, μ - value	300000
Sd-value (0.75 mm)	225 m
Sd-value (1.0 mm)	300 m

Cladseal SA

Cladseal SA is a self adhesive waterproofing strip based on the rubber polymer EPDM. The product consists of a 1.0 mm thick scrim-reinforced EPDM membrane coated with 0.6 mm sticky butyl which is covered with a release film. The EPDM and sticky butyl together gives us a product with high water vapour transmission factor. Cladseal SA comes in black colour.



Cladseal SA	
Thickness	1.6 mm
Length	20 m
Width	Specified, from 100 to 1700 mm
Water vapour transmission factor, μ - value	2000000
Sd-value (1.6 mm)	3200 m

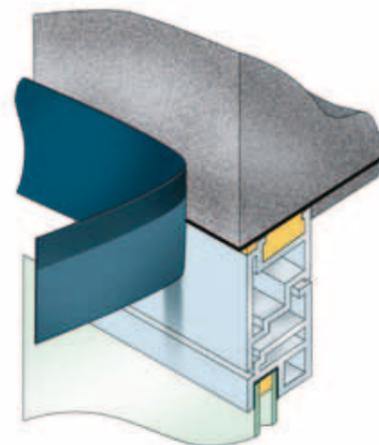


Cladseal SA-Fix

Cladseal SA-Fix is an elastomeric waterproofing strip based on the rubber polymer EPDM with a low water vapour transmission factor and is partly coated with sticky butyl tape. The product comes in black colour and has a surface texture on both sides for maximum adhesion.



Cladseal SA-Fix	
Thickness	0.6 / 0.75 / 1.0 / 1.2 / 1.5 mm
Length	25 m
Width	Specified, from 100 to 1700 mm
Water vapour transmission factor, μ - value	32000
Sd-value (0.6 mm)	19.2 m
Sd-value (0.75 mm)	24 m
Sd-value (1,0 mm)	32 m
Sd-value (1.2 mm)	38.4 m
Sd-value (1.5 mm)	48 m



Cladseal SA-Fix, tape application examples

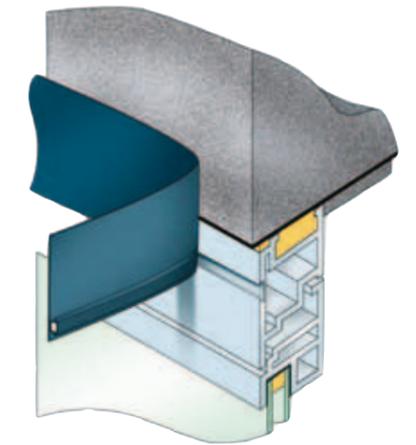
-  Sticky tape on one edge
-  Sticky tape on two edges
-  Sticky tape on two edges, opposite sides

Cladseal P-Fix

Cladseal P-Fix is an elastomeric waterproofing strip based on the rubber polymer EPDM with a low water vapour transmission factor and has along one side an EPDM profile attached. The profile is designed to fit into a corresponding track in the aluminum or PVC framework. The product comes in black colour and has a surface texture on both sides for maximum adhesion.



Cladseal P-Fix	
Thickness	0.6 / 0.75 / 1.0 / 1.2 / 1.5 mm
Length	25 m
Width	Specified, from 100 to 1700 mm
Water vapour transmission factor, μ - value	32000
Sd-value (0.6 mm)	19.2 m
Sd-value (0.75 mm)	24 m
Sd-value (1,0 mm)	32 m
Sd-value (1.2 mm)	38.4 m
Sd-value (1.5 mm)	48 m



Cladseal Adhesives and Primers

Contact Adhesive 5000

Contact Adhesive 5000, in tins of 4.5 kg or 0.9 kg. Applied on both rubber strip and substrate with brush or roller. When surface feels dry to the touch, (10-15 minutes) the strip is pressed against surface. Synthetic polymer and resins dissolved in inflammable solvents. Coverage 0.5 kg/m².



Paste Adhesive 3300

Paste Adhesive 3300, 600 ml sausage pack. Applied on substrate with standard type of hand gun or putty spade. Adhesive based on synthetic rubber. Coverage: 10-12 m/sausage.



Sealant 5590

Superseal Sealant 5590, in 310 g cartridge. Silicone based sealant with excellent adhesion to rubber and most substrates. Coverage 8-12 lin. m/cartridge.



Primer 9800

Primer 9800, in 6 litre metal tin. Primer based on a synthetic rubber and synthetic resins, dissolved in inflammable organic solvents. Used on porous substrates and for consequent use with Cladseal SA. Coverage approx. 3 sqm/litre.





Our operations are conducted according to ISO 9001 and ISO 14000. Products and systems are tested according to applicable standards, supervised by independent laboratories, authorities and certified to local building codes in all the markets where we are active.



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The Watertight Difference

Unique rubber membranes

Rubber is elastic, not plastic. Vulcanisation creates a stable cross-linked polymer structure with unsurpassed dimensional stability, elasticity and long term durability. Our systems involve patented, very competitive elastomeric materials and splicing techniques.

Fully engineered systems

30 years of close co-operation with architects, construction engineers and roofing contractors have resulted in complete and reliable solutions comprising rubber membranes, installation methods and compatible accessories; all backed by efficient technical service.

Focus on the environment

Environmental protection and care comes naturally to a supplier of products that contribute to the conservation of water, as well as the protection of goods and property from water leakage and moisture. Our rubber membranes are chemically stable and contain no problematic additives such as plasticisers, heat- or UV-stabilisers. They do not release any substances that cause allergies or hazards to the environment. Recycling options are available for membranes reclaimed from old installations.