

Technical Data Sheet

Adheseal

Allflex 101

High Performance Joint Sealant, Adhesive & Bedding Compound

Description:

Allflex 101 is a highly elastic, clear hybrid acrylic joint sealant/adhesive with exceptional weathering resistance. It exhibits outstanding adhesion to most building materials while maintaining superb elasticity in both hot and cold climates.

This versatile sealant serves various applications, including glazing and bedding compound for timber joinery, as well as sealing and adhering to exterior and interior substrates subjected to movement, such as windows, doors, precast panels, tilt-up construction, blockwork, brickwork, timber, metal, and many plastics, including acrylic and polycarbonate.

Allflex 101 offers several advantages, including excellent weathering ability, slump resistance, superior adhesion without the need for priming, low modulus for superior elasticity, non-staining, non-toxic, non-hazardous, no isocyanates, and paintable. Priming is not normally required for most substrates.

Uses:

- As a glazing & bedding compound for timber joinery.
- For sealing and adhering to exterior and interior substrates that are subject to movement, e.g., windows and doors.
- Precast panels, tilt-up construction.
- Roofing, especially polycarbonate.
- Sealing around windows and doors.
- Sealing weatherboard panels.
- Sealing gaps and cracks.
- Alternative to silicone or solvent-borne sealants.
- Display signs.



Benefits:

- Excellent weathering ability.
- Excellent slump resistance.
- Superior adhesion (no priming).
- Superior elasticity (low modulus).
- Non-staining.
- Non-toxic, non-hazardous, no isocyanates.
- Paintable.
- Dries clear.
- Easy to use.
- Water clean-up.
- Interior/exterior use.
- Permanently flexible, $\pm 25\%$ joint movement.
- Strong adhesion.
- Mould resistant.

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Acceptable Substrates:

- Masonry, cement sheet
- Glass
- Brick
- Metal (except Lead & Copper)
- Timber
- Plastics, Acrylic & Polycarbonate
- Stone
- Painted surfaces
- Rubber
- Fibreglass
- Porcelain
- Aluminium
- Powder coat
- Waterproof membranes

Limitations:

Allflex 101 is NOT suitable for use in the following applications:

- Not for permanent water immersion, e.g. fish tanks, swimming pools
- Not recommended in situations where movement exceeds 50% of the original joint dimensions
- Not suitable for use where high abrasion, e.g. foot traffic, is expected
- Sealant must be protected from water until cured
- Using a three-sided non-porous channel, e.g. aluminium, plastic may cause a significantly extended curing time and potential wash out upon exposure to water prior to cure
- Totally confined spaces - as the sealant requires atmospheric humidity to cure, it will not cure where it does not have access to atmospheric humidity
- Adhering Mirrors (High Power 609 can be used - test first)
- Structural Glazing (N-80 or N-60 Glazing silicone)
- Composite panels - (Adheseal recommends Hi Flex Construction, subject to test first)
- All Stone (we recommend the completion of a stain testing program before using any sealant on stone); S100 is recommended for marble, granite (after stain test)
- Do not clean or treat the sealant with materials, cleaning agents or solvents that may affect or discolour the sealant, particularly during product curing.

Application:

Surface preparation:

All surfaces must be structurally sound, stable, dry, clean, and free of dust, loose, flaking, friable material and free from oils, grease, form release agents, curing compounds, and any other surface contamination that may hinder adhesion. Substrate must be free from surface water and continual dampness. Concrete must be allowed to cure for at least 28 days. Failure to do so may result in poor adhesion and subsequent delamination. Use the two-wipe process for impervious substrates. Ensure the cloths are clean and changed frequently and use a suitable cleaner/solvent such as methylated spirits. To achieve a neater finish and to avoid getting sealant on the adjoining surfaces, mask joint edges with tape. Before use, a preliminary adhesion test is suggested.

Priming: Due to the high bond strength of Adheseal sealants, adhesion is normally achieved without priming on most substrates. However, for optimal adhesion and critical high-performance applications and highly stressed joints, if priming or surface preparation is being considered, review the following.

Non-porous substrates: Aluminium, waterproof membranes, anodised aluminium, stainless steel, PVC, galvanised steel, powder-coated metals or glazed tiles: slightly roughen the surface with a fine abrasive pad. Clean and pre-treat using Adheseal 50A surface prep applied with a clean cloth. Once primed, allow no less than 30 minutes, no longer than 2 hours, before applying the sealant/adhesive. For metals, such as copper, brass and titanium-zinc, and plastics such as PVC, an adhesion test is advised.

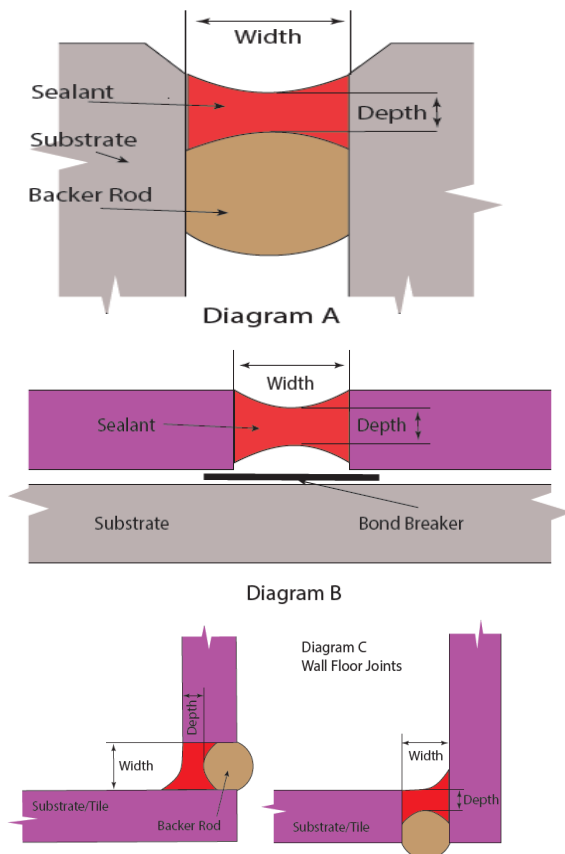
Porous substrates: Concrete, aerated concrete and cement-based renders, mortars and bricks: prime surface using Everflex Supaprime applied by brush. Once primed, allow no less than 30 minutes and no longer than 2 hours before applying the sealant/adhesive. For more detailed advice and instructions, contact Adheseal Technical Services. Note: Primers are adhesion promoters and not an alternative to improve poor preparation and/or cleaning of joint surfaces.

Primers also improve the long-term adhesion performance of the sealed joint. Avoid excessive application of primer as this can cause puddles at the base of the joint.

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Sealant Joint Design:

Expansion Joints: Allflex 101 is capable of $\pm 25\%$ joint movement. Where possible, the sealant should be at a 2:1 ratio (width:depth). Diagrams A & C For internal joints, the width and the depth of the joint should be a minimum of 6mm and a maximum of 10mm deep, and for external joints, 10mm. For joints greater than 10mm deep, a backing rod should be used. Use an open-cell foam backing rod 25% larger than the joint width to control the depth of the joint sealant. The sealant should only be fixed to two surfaces to allow movement. Hence, on flat joints, use a polyethylene tape or release agent to prevent 3-sided adhesion. Diagram B. Tool off straight away using a spatula to a flat, not concave finish.



Width	Depth
6-10mm	As width min 6mm
10mm	6-8mm
15mm	7-10mm
20mm	10mm
25mm	10mm

Installation:

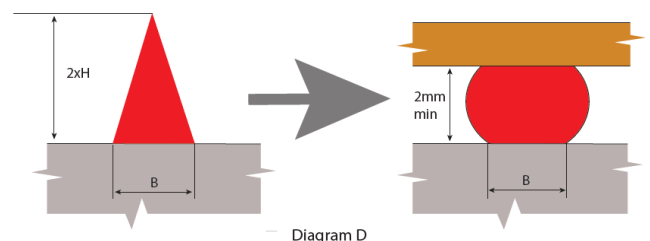
Note: Allflex is white when applied and progresses to clear as the sealant cures. Apply at a temperature between 5°C and 40 °C.

To apply Allflex 101 as a sealant: Cut the tip off the cartridge. Cut the nozzle at a 45° angle to the desired thickness. Screw the nozzle to the cartridge. Insert the cartridge and nozzle into the cartridge gun. Hold the gun at a 45° angle with the nozzle in contact with the bonding surface. Apply by pushing adhesive ahead of the nozzle, thus ensuring adhesive is pushed firmly into place, in a steady, continuous bead, ensuring good contact with the surface, filling the prepared joint completely, taking care not to entrap air (entrapped air may cause bubbles in the sealant). Protect the sealant from water until it dries clear.

Tool off with a moistened spatula to finish the joint smoothly before the skin forms, approximately 10 minutes. While the sealant is still wet, clean off any excess. If joint edges have been masked, remove tape whilst the sealant is still wet.

If the sealant has dried on the surface, clean with solvent to soften it, then scrape off with a blade.

To apply Allflex 101 as an adhesive: cut the nozzle at a 90° angle to the width of the desired bead, then cut a wedge in the nozzle twice the height of the width of the bead. Cut the tip of the cartridge. Insert the cartridge and nozzle into the cartridge gun. Hold the gun at a 90° angle with the nozzle flat on the surface. Dispense the sealant following the nozzle, thus ensuring the sealant is standing in place, in a steady, continuous triangular bead. Bring the two surfaces together, compressing the triangular bead to no less than 2mm, ensuring good contact with both sides of the joint to achieve the required adhesion. Diagram D.



The incompatibility of some substrates may cause discolouration of the sealant, poor sealant adhesion or long-term degradation of the sealant. Always carry out compatibility tests where contact with potentially incompatible materials occurs.

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Glazing Timber Joinery:

Apply a thin bead to the glazing rebate & place glass
Apply in small beads (approx. 2- 3mm) and press the cover strip onto the glass immediately

When cured, remove any squeeze out by cutting with a sharp blade.

Masking: It is recommended to use masking tape where neat or exact joint lines are required. Remove the tape within the skin time after finishing installation.

Coverage:

Coverage will vary according to joint width and depth, as well as the type and method of application. The figures below can be used as a guide for:

Adheseal Sealant Calculator			
Joint Size mm	M per ctg	M Per ssg	M per Lt
6 X 6	8.3	16.7	27.78
10 X 6	5.0	10.0	16.67
10 X 10	3.0	6.0	10.00
12 X 12	2.1	4.2	6.94
15 X 8	2.5	5.0	8.33
15 X 15	1.3	2.7	4.44
20 X 10	1.5	3.0	5.00
20 X 20	0.8	1.5	2.50
25 X 12	1.0	2.0	3.33

Triangular Joint Beads			
Joint Size mm	M per ctg	M Per ssg	M per Lt
6 X 6	17	33	56
10 X 10	6	12	20
10 X 15	4	8	13
10 X 20	3	6	10
20 X 20	2	3	5

Adheseal Adhesive Calculator			
Bead Diameter mm	M per ctg	M Per ssg	M per Lt
4	23.9	47.7	79.58
5	15.3	30.6	50.93
6	10.6	21.2	35.37
7	7.8	15.6	25.98

Clean Up:

While the product is still wet, tools and spills can be cleaned with Xylene. The cured product can be removed by mechanical means.

For cleaning skin, use Adheseal Hand Wipes.

Cure Time:

Allow approximately 10 minutes skin time, cure time 2mm per day from surfaces exposed to atmosphere @25dg & 50% humidity. Please note all cure times vary, full cure can take 4-6 days depending on bead size, atmospheric conditions and porosity of the substrate. Allflex 101 is a water evaporation curing system; therefore, when applied to non-porous substrates, cure time can be longer. If the environment around the curing Allflex 101 is kept warm and dry, this will aid the curing process.

Note: Allflex is white when applied, clear when cured.

Colours:

White when applied, clear when cured.

Packaging:

300ml Cartridge ALLFLCLR/CTG

Note: Before application, refer to all relevant TDS's and SDS's detailed product specifications & application instructions.

Physical Properties:	
Type of product	Hybrid Acrylic
Curing system	Evaporation of water
Cure Time	2mm / 24Hours
Density (specific gravity)	1.04
Shore A Hardness	10
Movement capability	± 25%.
Elongation at break	1150%
Consistency	Soft paste
Application temperature	5°C to +35°C
Working Time	30m @ 23°C & 50% RH
Storage: Cool, dry between	10°C and 35°C
VOC	24gm/lt
Shelf life	24 months in original packaging
Clean up	water
Colour.	Clear (cured)
Packaging	300ml Cartridges
Aymar cyclic durability Glass, Class A Sealant	Pass
Test certificates to ASTM C-732 UV Accelerated Weathering	No Cracking or Adhesion Loss

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Adheseal B.A.T. Program: (Bond Adhesion Testing).

For over 15 years, Adheseal has offered a service in which a program has been established to help eliminate potential site problems by pre-testing Adheseal sealants and adhesives with most building materials to which our sealants and adhesives are applied.

This service is available for projects where pre-installation testing of our products will aid in determining the best application methodology to achieve optimum adhesion. Contact your Adheseal representative for further information.

Specification:

The information contained in this TDS is typical but does not constitute a full specification, as conditions and specific requirements may vary from project to project. The instructions should be considered as a minimum requirement. The applicator or contractor must use their skill, knowledge, and experience to carry out additional works as may be necessary to meet the requirements of the project. Specifications for specific projects should be sought from the company in writing.

Conditions Of Use and Disclaimer:

The information contained in this TDS is given in good faith based upon our current knowledge and does not imply warranty, express or implied. The information is provided, and the product is sold on the basis that the product is used for its intended purpose and is used in a proper workman-like manner in accordance with the instructions of the TDS in suitable and safe working conditions. Under no circumstances will the Company be liable for loss, consequential or otherwise, arising from the use of the product.

Health and Safety:

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation: Remove to fresh air. Call a physician if symptoms persist.

Skin Contact: Wash with soap and water.

Eye contact: Use eye wash to remove a chemical from your eye regardless of the level of hazard.

Ingestion: Do not induce vomiting. Seek medical attention if symptoms develop. Induced vomiting may lead to aspiration of the material into the lungs, potentially causing chemical pneumonitis that may be fatal.

PPE for First Aiders: Wear gloves, apron, safety glasses, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Notes to physician: Treat symptomatically. Provide medical professional with SDS.

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