

RLA FLEX PRO-PU

Polyurethane Adhesive/Sealant



DESCRIPTION:

RLA FLEX PRO-PU is a one-component, fast-cure high-performance construction joint sealant and adhesive. RLA FLEX PRO-PU is a thixotropic moisture-curing Polyurethane sealant /adhesive with high mechanical strength and excellent resistance to weathering.

RECOMMENDED USE:

- Construction joints
- Expansion joints on heavy and light precast concrete panels.
- Expansion joints in buildings.
- Joints in precast & tilt-up concrete panels.
- Perimeter sealing around window and door frames - Curtain walls.
- Sealing of penetrations in walls or floors.
- Retaining walls.
- Brickwork, ceramics, stone, granite & marble- Sanitary applications.
- Other substrates, including anodised aluminium, steel, glass, dry timbers, and some tiles.
- Adhering Aluminium Composite panels to Cement sheets, concrete, or masonry.
- Trafficable stairs, roads, runways, and pavement.
(Always test adhesion to the substrate before starting a project)

FEATURES AND BENEFITS:

- Class A Sealant – Total Joint movement total 50% ($\pm 25\%$).
- Non-Hazardous – classification (NOHSC & ADG code / Aust Safety and compensation council)
- Low VOC.
- Good adhesion on both porous and non-porous substrates.
- Excellent durability.
- Good weathering resistance.

FEATURES AND BENEFITS:

CONTINUED:

- Non-sag on vertical and expansion joints up to 30 mm width.
- Short skinning time.
- Paintable – see notes.
- Does not support fungal growth.

SURFACE PREPARATION:

All substrates should be clean, sound, dry, dust, wax, oil and grease free. In most cases, no primer is required on most substrates. (Preliminary tests recommended). Any loose particles should be removed before application. If necessary, rub down metal surfaces beforehand. Clean the substrates after rubbing them down. Allow the substrate to dry after cleaning/degreasing.

MASONRY/BRICK/CONCRETE:

Any loose particles or laitance should be removed by hand or mechanical wire brush followed by blowing down with oil-free compressed air. Use RLA cementitious or epoxy mortars/coatings to repair any damaged joints.

METALS:

Surfaces must be free of rust, scale or oxide films and clean the substrate with methyl ethyl ketone (MEK), acetone or grease remover. Apply [RLA UNIVERSAL PRIMER](#) if necessary. Check the compatibility of the solvent used with the substrates. When using solvents, extinguish all sources of ignition and carefully follow the safety and handling instructions given by the manufacturer or supplier.

APPLICATION:

Apply at a minimum temperature of +5°C to +35°C
 RLA FLEX PRO-PU can be applied using a hand, air-operated cartridge, or sausage gun.

When tooling the RLA FLEX PRO-PU, ensure a concave finish.

(For easier use, we recommend storing the material between +10°C and < +30°C before use.)

RLA FLEX PRO-PU Sausage 600ml - Place in applicator gun, then cut just behind the aluminium clip (removing clip) to open sealant in foil.

Fit the application gun with a suitable nozzle cut to deliver the correct bead size. If primers are used on joints (generally applied after backer rods are in place) must not exceed the open time and must be thoroughly dry; otherwise, in rising temperatures, the trapped solvent can blow bubbles in the uncured sealant.

Some porous substrates must have their porous area surfaces thoroughly sealed to avoid air bubbles being trapped in the uncured sealant if the substrate temperature rises quickly.

Extrude the RLA FLEX PRO-PU into the joint, ensuring that no air is trapped in the joint.

Wide joints will require more than one pass of the application gun to ensure that sealant is in complete contact with the sides and bottom of the joint.

Tooling of the sealant will assist by forcing the sealant into the joint against its sides and backup material; this will also break any air bubbles and expose any air pockets.

Finally, tooling of the joint surface can be done effectively with the tooling of a spatula.

When masking tape is used for neatness, ensure the tape is removed from the sides of joints before the sealant starts to skin over or cure.

Always allow sufficient surface exposure to moisture.

In conditions of low atmospheric humidity, it is advisable to spray the surface with a fine mist of water to promote early skinning once the joint is finished.

JOINT DESIGN:

Joints up to 12 mm wide, width-to-depth ratio = 1:1

Joints over 12 mm wide, width to depth ratio = 2:1 (Minimum joint depth 7mm: maximum joint width 35mm).

An approximate rule of thumb for joints in pre-cast concrete
 Joint height (in metres) up to 2.0m / 2.0-3.5m / 3.55.0m / 5.0-6.5m / 6.5-8.0m

Joint width (mm) 10 15 20 25 30

To ensure that the correct joint width-to-depth ratio is achieved and to prevent the sealant from adhering to the bottom of the joint, it is highly recommended to use a tight-fitting, non-absorbent backing material such as an open-cell polyurethane or closed-cell polyethylene backer rod.

Open-cell polyurethane backer rod allows ambient moisture access to the front and back of the joint simultaneously, allowing faster curing.

Caution – A closed-cell polyethylene backer rod can cause bubbling in uncured sealant as the temperature rises if its outer skin is punctured.

Do not use oil or tar-impregnated backing materials.

COVERAGE:

One RLA FLEX PRO-PU 600ml sausage will give the following.

Approximate - volume in linear meters.

JOINT IN mm	APPROX LINEAR METERS
12mmx12mm	3.9
15mmx7mm	4.1
20mmx10mm	3.0
30mmx15mm	1.3

PAINTABILITY:

RLA FLEX PRO-PU can be painted after fully cured. Paints and coatings containing solvents may cause the sealant to react and become tacky. Some coatings may crack or craze due to cyclical environmental movement. It is always recommended to conduct field tests to ensure compatibility with the desired coating.

TECHNICAL DATA:

PRODUCT INFORMATION:	
Appearance	Paste
Specific Gravity	Black: 1.16±0.05 All other colours: 1.18 ± 0.05
Shore A hardness (ISO 868-3 seconds)	25
Skin formation, superficial curing @23°C & 50%RH	90-150 minutes
Curing at +23°C and 50%	3-4mm/24 hours
Modulus at 100% elongation (ISO 8339)	44psi-(0.3 MPa)
Elongation at break (ASTM D 412)	> 600%
Movement Capability Percentage	±25%
Total Joint Movement	50%
Temperature Range	-40°C to +80°C
Application temperature	+5°C to +35°C
VOC Rating-g/l	35
Sagging (ISO 7390)	None
Resistance to UV radiation	Good
COMPATIBILITY WITH PAINTS	
Water-Based:-	Yes
Solvent-Based:-	Carry out compatibility tests.

LIMITATIONS & PRECAUTIONS:

- In structural bonding or transparent surfaces when the bond line is directly exposed to UV. –
- In chlorinated water such as swimming pools, spas etc.
- Where it is constantly immersed in salt water.
- Any material containing bitumen.
- For Structural glazing applications.
- To cement-based substrates within 28 days of initial pour or set.
- In trafficable joints greater than 7mm in width.
- At temperatures below +5°C or above + 35°C.
- Exposed to water or alcohol before it has completely cured.
- Using wet tooling techniques, such as soapy water.
- Don't apply less than 7mm in width and depth.

LIMITATIONS & PRECAUTIONS:

- Composite metallic façade systems can be subject to significant daily cyclical movement due to temperature variations. Crimping and bulging of installed sealant before complete cure may permanently deform the sealant finish before full cure, especially on northern & western elevations in full sunlight.
- For best results, use opened cartridge or sausage the same day; otherwise, the sealant in the nozzle will cure and have to be removed.
- When applying sealant, avoid air entrapment.
- Minimum joint width for caulking around window frames is 10mm.
- White colour material may become yellow with age.
- In some cases, sealant can be stained by interaction with other components used in the structure and finishes. (Test is always recommended first).
- Joints in low-humidity environments should be sprayed with a mist of water as soon as tooling off is complete to help accelerate the curing process and minimise the risk of early movement cracks.
- For specific chemical resistance, please get in touch with our RLA Technical Service Department.
- Conduct a simple paint test first for compatibility.
- Where possible backer rod should be placed in a joint before it is primed.
- Do not puncture closed cell polyethylene backer rod during installation; this can lead to “outgassing”.
- Open cell backer rod allows moist air access to the bottom of the joint so that the sealant can cure simultaneously from the front and back of the joint.
- Make sure you clean any old joint containing silicone sealants – removing all before applying RLA FLEX PRO-PU sealant. Consult our RLA Technical Department.
- Alcohol-containing solvents should not be used as a tooling aid, as these will inhibit the cure of polyurethane adhesives/sealants.
- Epoxy resin coatings should be fully cured before applying the adhesive / sealant, as the uncured coatings could inhibit the cure of polyurethane adhesives/sealants.
- Do not apply to damp or wet surfaces or joints.
- Do not apply if rain is imminent.
- Do not overwork the sealant surface.

SAFETY & HANDLING:

- Do not breathe dust. Wear suitable respiratory protection.
- Use in well-ventilated areas.
- Avoid contact with skin and eyes.
- Wear eye protection and suitable gloves and clothing.
- Do not eat, drink, or smoke while using this product.
- Take off contaminated clothing and wash it before reuse.
- If on the skin, wash with plenty of soap and water.
- If in the eyes: rinse cautiously with water for several minutes.
- Remove contact lenses; if present, continue rinsing.
- If inhaled, remove them to fresh air and keep them at rest in a position comfortable for breathing.
- If any skin or eye irritation persists or you feel unwell, get medical attention.

Safety Data Sheet is available upon request.

FIRST AID:

If poisoning occurs, contact a doctor or Poisons Information Centre.

Skin: Wash off with warm water and soap.

If swallowed, DO NOT induce vomiting. Give a glass of water.

For advice or if you feel unwell, contact a Poisons Information Centre: Australia ph. 131126, New Zealand ph. 0800 764 766 or a doctor at once.

If swallowed, do NOT induce vomiting.

IF SWALLOWED, immediately call the Poisons Information Centre or a doctor.

IF ON SKIN Remove immediately all contaminated clothing and wash skin with soap and water.

If skin irritation occurs, get medical advice/attention.

IF IN EYES Rinse carefully with water for several minutes.

If eye irritation persists, get medical advice/attention.

WARRANTY STATEMENT:

RLA Polymers guarantees this product against manufacturing defects and guarantees it to be manufactured to our published specifications. We certify that this product is suitable for use when fully cured and will perform as described in our technical data sheet or other published materials.

RLA Polymers will replace the product free of charge when purchased from any legally verifiable source and where a product is proven to have been stored, handled, and install according to instructions published on our packaging and within the stated shelf life. The Installation of all materials must be carried out per the relevant Australian Standards.

Warranty doesn't apply if damage, loss, failure to follow instructions, or other circumstances are out of our control.

Sufficient time and access to investigate any complaint must be accorded to RLA Polymers.

The consumer is responsible for any expenses incurred in making a claim.

A claim form can be requested by:

PHONE: [1800 242 931](tel:1800242931)

EMAIL: info@rlapolymers.com.au

MAIL: [215 Colchester Road Kilsyth Victoria 3137 \(Attention Customer Service\)](mailto:215ColchesterRoadKilsythVictoria3137)

WEBSITE: www.rlapolymers.com.au

AUSTRALIAN CONSUMER LAW:

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. The benefits under our warranty are in addition to other rights and remedies available to the consumer under the law in relation to the goods and services to which the warranty relates.

DISCLAIMER:

All statements and technical information contained herein are based on tests we believe to be reliable, but the accuracy thereof is not guaranteed. Users assume all risk and liability resulting from the use of the product and must confirm the suitability thereof by their own tests. Conditions of Sale contain a limited warranty against manufacturing defects.