

Louvre Roof Systems

Louvre Roof Awning System User, Maintenance & Warranty Manual



Terms & Conditions Apply



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MED TWIST LR 200

Louvre Roof Systems



////// Sophisticated louvre roof system for all weather conditions



Outdoor Blinds and Awnings Australia is proud to introduce an innovative all-aluminum structure that seamlessly enhances both outdoor and indoor spaces, the **Med Twist LR 200**. This stylish bioclimatic pergola eliminates the distinction between inside and outside with its elegant, seamless and clean design. Experience year-round outdoor living through the 135-degree rotating blades, allowing for natural air circulation and shade control. The structure provides complete protection and can be customised with various finishes, accessories, and automated features - managed by a convenient remote control.

Med Twist LR 200

Louvre Roof Systems

Ready for any weather

With its elegant and minimalist design, this motorised louvre roof system is constructed with extruded aluminium louvre blades that can be adjusted up to a 135° angle with a push of a button. The blades' flexibility ensures total user control over the degree of shade, UV protection and air circulation.

Features



INCLINING ALUMINIUM LOUVRE BLADES
Up to 135° opening angle

CONSTRUCTION
Powder Coated Extruded Aluminium

COUPLED MODULAR SYSTEM
Up to 10 modules can be connected seamlessly in width and length

SYSTEM SIZE
Width: min 2m - max 4.6m
Depth: min 2m - max 6m

INSTALLATION
Free-standing, wall and/or ceiling mountables

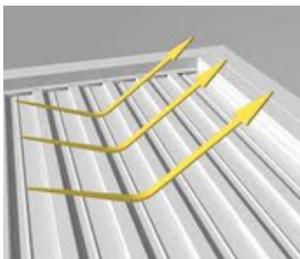
OPERATION OPTIONS
Motorised

Options and Features

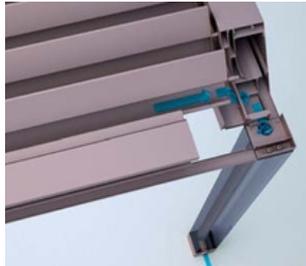
OPTIONAL LED LIGHTENING



PROTECTION AGAINST SUNLIGHT AND UV



OPTIONAL INTEGRATED GUTTER SYSTEM



AIRFLOW ADJUSTMENT FOR BETTER VENTILATION



COUPLED SYSTEM UP TO 10 MODULES

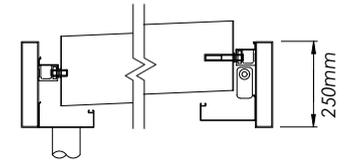


WATERPROOF AND WATERTIGHT

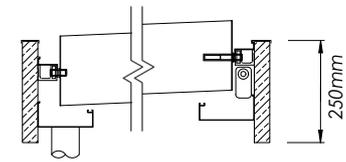


SUPPORT FRAME OPTIONS

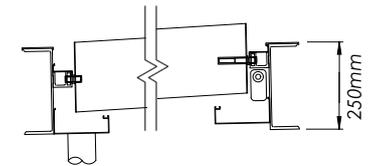
TYPE 1 ALUMINIUM FRAME



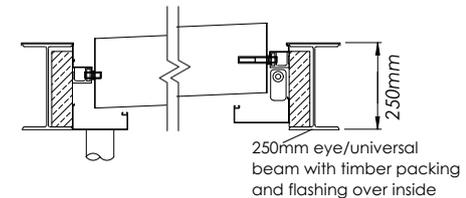
TYPE 2 TIMBER FRAME



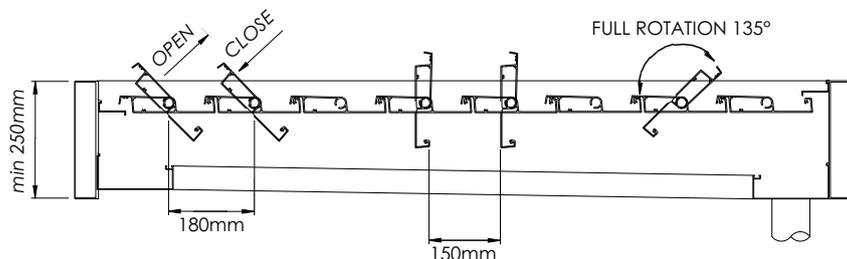
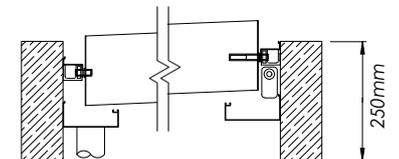
TYPE 3 REVERSE STEEL PFC



TYPE 4 CLADDED UNIVERSAL BEAM



TYPE 5 MASONRY REVEAL/FRAME



CUSTOM MADE

Each Med Twist LR 200 Louvre Roof System is custom made specifically to suite your project. Choose from over 100 premium Dulux and Interpon powder-coating colours to further customise your outdoor pergola.

AUTOMATION

Operation can be utilised through a **remote control** or by a hardwired **wall switch panel**. A wide range of **Automation sensors** such as wind or wind/sun sensors can be easily integrated with **Smart Home Automation Systems** for convenient voice control commands.



MED OPRA

Retractable Louvre Roof System



////// Sophisticated louvre roof system for all weather conditions



Outdoor Blinds and Awnings Australia is proud to introduce an innovative all-aluminum structure that seamlessly enhances both outdoor and indoor spaces, the **Med Opra**, retractable louvre roof.

The Bioclimatic Pergola is an innovative space-saver that provides a truly unique and comfortable outdoor living space. Featuring automated louvres that adjust the shading over your area when retracted or open; the Med Opra creates a perfect oasis for your home or business in any weather.

Med Opra

Retractable Louvre Roof Systems

Ready for any weather

With its sleek and minimalist design, this motorised louvre roof system is built using extruded aluminum louvre blades that can be angled up to 80 degrees and retracted effortlessly with the press of a button. The blades' flexibility ensures total user control over the degree of shade, UV protection and air circulation.

Features



INCLINING ALUMINIUM LOUVRE BLADES

Up to 80° opening angle

CONSTRUCTION

Powder Coated Extruded Aluminium

STACK SIZE

28% of total projection

SYSTEM SIZE

Width: min 2m - max 4m

Depth: min 2m - max 7m

INSTALLATION

Free-standing, wall and/or ceiling mountables

OPERATION OPTIONS

Motorised

COUPLED MODULAR SYSTEM

Up to 10 modules can be connected seamlessly in width and length

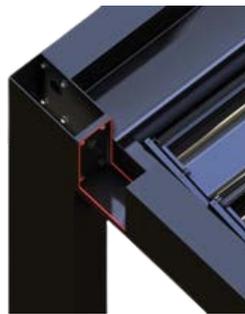
Options and Features

RAIN WATER DRAINAGE

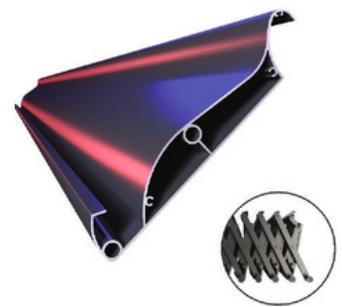
The rain water drainage and outlet point vary for each system and is dependent on the system projection. The Med Opra features a slope with a slight variation in height between the front and back, facilitating drainage of excess water.

The system requires levelled surface for installation to ensure the drainage system works correctly.

INTEGRATED GUTTER SYSTEM



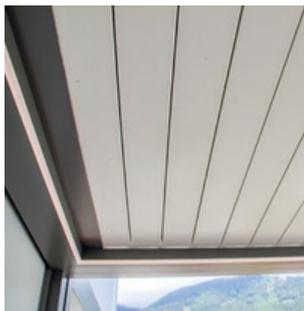
V-SHAPE BLADE CONNECTION



HIDDEN GUTTER SYSTEM

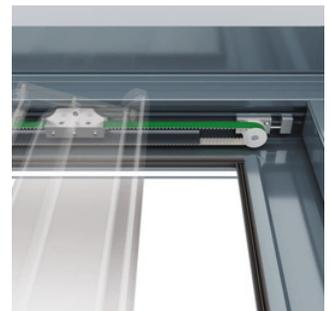


OPTIONAL LED LIGHTENING



KEVLAR BELT SYSTEM

Withstands all weather conditions



SEALED WHEN CLOSED

Due to smart wicks system



CUSTOM MADE

Each Med Opra Louvre Roof System is custom made specifically to suit your project. Choose from over 100 premium Dulux and Interpon powder-coating colours to further customise your outdoor pergola.

AUTOMATION

Operation can be utilised through a **remote control** or by a hardwired **wall switch panel**. A wide range of **Automation sensors** such as wind or wind/sun sensors can be easily integrated with **Smart Home Automation Systems** for convenient voice control commands.



Basic Information:

Thank you for choosing to buy this Outdoor Blinds and Awnings product.

Before using the product for the first time, please take the time to thoroughly review this operating guide to ensure smooth and trouble-free operation.

For the safety of individuals, it is crucial to adhere to these instructions. Careful attention should be given to the notices outlined in the operating guide. Failure to do so releases the manufacturer from any liability obligations. Additionally, kindly take note of the information on the product itself and its packaging.

We kindly ask you to keep all manuals and documents secure and in the event of selling the product, pass them on to the new owner.

Validity

This operating guide has validity for the following Outdoor Blinds and Awnings external products:

LOUVRE ROOF SERIES:

MED TWIST LR 200

MED OPRA

Operating & Cleaning Requirements

Before beginning the cleaning process, it is recommended to rinse or hose down aluminum blades, pivots, flashing, gutters, and associated hardware with water to effectively loosen and remove surface dirt and stains. For detailed instructions, refer to Dulux's technical advice on caring for and maintaining powder-coated surfaces.

To clean, prepare a bucket of warm water with 5% neutral dishwashing detergent. Use a soft sponge or similar tool to hand wipe both sides of the blades, ensuring a test on a small area before proceeding with the entire system. Clean no more than 10 blades at a time, then thoroughly rinse with a hose to remove all detergent.

Please note (Must do): Before operation, carefully inspect the top of the blades for any lodged debris such as branches, sticks, leaves, tools, balls, acorns, or similar items. Follow approved safe work practices.

Please note (Must not): Avoid using abrasive cleaners, scrubbing brushes, bleach, or high-pressure water on aluminum powder-coated parts under any circumstances. Operating the roof with debris present may cause damage upon closure, so ensure removal before closing. For additional information, consult Dulux's technical advice on the care and maintenance of powder-coated surfaces.

User Information - Electric Motors

Electric motors are consistently supplied with a stable power source of 240V, and during installation, an external receiver is tuned into the motor/remote.

Important: If the power supply to the motor is consistently interrupted, the pre-programmed settings may be erased. In such a case, a service call by an Outdoor Blinds and Awnings technician is necessary to reset the motor and re-establish identification with the remote. Alternatively, you can visit the Linak **website for guidance on tuning remotes into the inline RTS receivers**.

Please Note:

Should the light on the remote switch (or handheld remote) appear dim, it is an indication that the battery needs replacement. Flip the remote over, utilize a small Philips head screwdriver to remove the screw, slide off the cover, replace the battery with the same type, reattach the cover, screw it back in, and the remote will resume normal operation

User Information - Electric Motors

Press Up Button – Opens Blades.

Press Stop Button – Stops Blades at this position.

Press Down Button – Blades will close.

Please Note:

Should the light on the remote switch (or handheld remote) appear dim, it is an indication that the battery needs replacement. Flip the remote over, utilize a small Philips head screwdriver to remove the screw, slide off the cover, replace the battery with the same type, reattach the cover, screw it back in, and the remote will resume normal operation.

User Information - Sensors (wind, sun & rain)

Rain sensors, along with wind and sun sensors, are continuously supplied with a steady 240V power source. During installation, the technician will configure the rain sensor to initiate the closure of blades. This action is triggered when the sensor detects rain for 30-60 seconds, sending a signal to the motor to fully close the system.

Please Note:

If the sensor is situated near drip lines or under overhead trees, it may inadvertently close the roof upon detection. It is essential to keep the sensor clean and free from dirt and animal droppings to ensure proper functionality.

Wind Limits

- Up to 130km/hr for Med Twist & Med Opra

Cleaning and Maintenance

Cleaning and maintaining Outdoor Blinds and Awnings products is crucial for ensuring the validity of your warranty throughout its duration. A qualified technician should perform the following procedures.

An Outdoor Blinds and Awnings product is deemed dirty when it shows signs of the gradual buildup of small particles carried by atmospheric agents such as wind, rain, and coastal conditions. To prevent the sedimentation of pollutants, Outdoor Blinds and Awnings recommends adhering to the following cleaning and maintenance program. (Please refer to the Dulux technical advice on the care and maintenance of powder-coated surfaces for additional guidance).

Description of Works to be Completed Bi-annually. (For coastal sites - every 6 weeks).

- Use a non-metallic brush to dust off the aluminium, followed by a thorough rinse with clear water.
- Perform a light rinse using detergent solution, maintaining a concentration of 5 – 10% with water temperature at 20 degrees. Ensure the use of a neutral detergent solution.
- Rinse the surface thoroughly with clear water.
- Check that all control settings are correctly configured and ensure the roof opens and closes as intended. Confirm the proper functioning of wind, rain and remote control mechanisms.

During operation, it's possible for tree branches or twigs to become lodged between the louvre blades, posing a risk of motor damage. To prevent this, kindly ensure that the blades fully open to allow any debris to fall freely. If necessary, gentle assistance by hand may be required

If the Buyer resells any Outdoor Blinds and Awnings products to another Buyer or End-User, the terms and provisions of this warranty must be included in such resale. However, Outdoor Blinds and Awnings responsibility to any third party in such a case is limited to its responsibility under the warranty to the original Buyer. It's important to note that if the new buyer lacks all necessary documentation, receipts, and manuals from the previous owner, we cannot guarantee the product.

Documents to be handed over to another Buyer or End-User to validate warranty:

- User Maintenance & Warranty Manual (this document)
- Proof of Purchase
- Completed Service Logbook (**annual service required to validate warranty**)

Powdercoating – Five Year Warranty

Cleaning is recommended every six months; however, in areas with higher pollutant levels, especially in coastal or industrial regions, a more frequent cleaning program should be implemented and documented (e.g., every three months).

While some potent solvents are suggested for removing sealants or building residues, they may be detrimental to the long-term durability of the powder-coated surface. It is advisable to avoid these solvents, as any damage may not be immediately visible and could take up to twelve months to manifest. Usage of such solvents for cleaning purposes will void the warranty. In cases where paint splashes, sealants, or other residues need removal, safe alternatives include Methylated Spirits, Turpentine, or White Spirits.

Please refer to Dulux's site for up to date details - <https://duluxpowders.com.au/warranties/>

Motors – Five Year Warranty | Accessories – One Year Warranty

Outdoor Blinds and Awnings warrants the motors and accessories to be free from defects in material and workmanship under normal and proper use for a period of five years for motors and one year for accessories (from date of invoice). Outdoor Blinds and Awnings' only obligation shall be to repair or replace defective equipment which does not conform to the warranty. Outdoor Blinds and Awnings shall not be liable for any injury, loss or damage, direct or consequential, arising out of, or the inability to use, the equipment. Before using, Buyer and/or the ultimate User shall determine the suitability of the product for its intended use, and User assumes all risks and liability in connection therewith.

Installation – Two Year Warranty

The installation warranty for external products extends for a period of two years, covering any installation-related issues or faults within that timeframe.

Consumables – One Year Warranty

Consumables such as Sikaflex, sealants, tapes, ropes, zippers, clips, and replaceable batteries are provided with a warranty coverage of one year starting from the date of the final invoice.

EXCLUDED FROM WARRANTY:

- Water damage to automation systems or interference with the automation system controls caused by the Buyer or a third party changing the limit setting of the goods.
- Interference with radio signals of automation systems caused by any external factors, including radio signals in the vicinity of the Goods, or internal electric systems to which the Goods are connected.
- Small colour variations from powdercoating colour samples and between components and profiles that are caused by industrial processes.
- If electrical accessories and other components have been used in disregard of the basic wiring diagram for which they were designed.
- Damage to or deterioration in the performance of Goods when repairs or adjustments have been undertaken by a party other than Outdoor Blinds and Awnings or a technician not approved by Outdoor Blinds and Awnings.
- Fair wear and tear, including but not limited to consumable parts such as side zips, lifting tapes and driving belts.

THIS WARRANTY DOES NOT APPLY:

- To damage where a system has been dismantled or repaired by other parties with clear evidence of abuse or violation.
- If a motor or accessory has been opened, dismantled or returned with clear evidence of abuse or other damage.
- If our written specifications are not properly applied by the Buyer, including when selecting equipment.
- If our written instructions for installation and wiring of the electrical connections have not been followed.
- If usage, adaptation or installation are not in accordance with our installation and operating instructions.
- To mechanical or chemical damages caused by other parties or other causes.
- To damage caused by storms, rain, extreme winds and tempest.
- To damage or malfunctioning, caused by incorrect or inappropriate electrical wiring of connections by other parties.
- Where the products were used to perform a function other than those for which they were designed and recommended.
- To damage created by obvious failure to regularly inspect and maintain, or fair wear and tear. (e.g. salt). An annual service call (by Outdoor Blinds and Awnings or a qualified technician nominated by OBA) is required to validate warranty – service log to be filled out by technician.
- Where any component other than Outdoor Blinds and Awnings componentry has been used, unless otherwise approved by Outdoor Blinds and Awnings in writing.
- To costs relating to incorrect measuring and/or installation not undertaken directly by Outdoor Blinds and Awnings.
- Damage resulting from the failure to clean or maintain the aluminum and/or hardware according to user manual instructions. Regular cleaning is mandatory, with a yearly service log signed by a tradesperson. In coastal or marine environments, more frequent cleaning (at least once every 12 weeks) is required to dissolve lodged dirt and maintain the powder coat finish.

Service Logbook:

Item	Action
Remote control	Check remote is working and LED lights indicate battery is OK. Replace battery if more than 12 months old.
Sensors	Inspect sensors if present. Test and ensure system responds.
Lubrication of moving parts	Spray dry lubrication in moving parts and visually inspect. Check all bolts & fixings are tight and have not become loose.
Ensure system is square & level	Measure rail width at front / back and diagonal measurements. If mounting structure has moved adjust system back into square.
Check motor limits are correct	Inspect front rail position when in / out to ensure stopping in correct position. Inspect wheels / mounts and drive tape positions.
Fabric Inspection	Visually inspect fabric joins and pockets to ensure all in good condition and no visible damage.
Check mounting brackets are tight	Inspect all rail fixings are firm and have not vibrated loose.
Motor cable inspection	Check motor power cable for any damage.
Inspect & clean timing belts	Visually inspect timing belts inside rafters from below. Hose out dirt and salt - full length of rafters.
Aluminium profiles and casing	Clean down all aluminium profiles with warm soapy water using mild detergent, rinse with clean cold water. (do not wet motor)
System fabric	Wash fabric with warm soapy water using mild detergent, rinse with clean cold water.
SERVICE COMPANY: NAME: DATE:	COMMENTS BY SERVICE STAFF:

WE RECOMMEND THIS IS COMPLETED BI-ANNUALLY OR MORE FREQUENTLY FOR COASTAL SITES
ANNUAL SERVICE CALL FROM DATE OF INSTALLATION IS REQUIRED TO VALIDATE WARRANTY

Trouble Shooting:

Problem	Possible Reason/s	Solution
No response from product when using the remote control.	<ul style="list-style-type: none"> No power. Time for batteries in hand held remote or motion sensor need to be replaced. 	<ul style="list-style-type: none"> Check power supply. Replace batteries.
Product stopped working while in use.	System motors have a built in thermal protection, after multiple uses it will stop to allow for motor to cool.	Wait for approx 15-20min and try again.
Wind sensor is retracting the product when in light wind.	Sensor setting is set low.	Adjust sensor to slightly higher setting.
Product is not working correctly as per pre-set motor limits.	Other electrical works on the home / building may have re- set the motors memory	Please contact our office or service team.
Angle of product has changed.	Position has changed after use in high winds or rain.	Please contact our office or service team.
Awning retracts without reason.	Batteries are depleted, safety feature retracts the awning when a sensor can't be found.	Replace the batteries in sensor.
Product retracts and extends in an untimely response to the environment. (Yo-yo effect).	The sensor may be in DEMO mode. 5 o'clock.	Return sensor to live range and out of DEMO mode.

Design Intent Statement - Water Reticulation

Product

MED TWIST
MED OPRA

Company

Outdoor Blinds and Awnings Australia

Statement

Outdoor Blinds and Awnings Australia Pty Ltd does not provide any warranty, representation, or guarantee regarding alterations to the original design of the Outdoor Blinds and Awnings - MED Twist / Opra Opening Aluminium Louvred Roof System.

Concerning the effectiveness of water reticulation, it is crucial to note that deviating from the specified product design intent, particularly regarding water dispersion from the gutter profile, can significantly compromise performance. It is specified that water should be dispersed vertically down from the gutter profile rather than horizontally. Failure by the client to complete the required works or adhere to Outdoor Blinds and Awnings Australia Pty Ltd Water Reticulation Specifications/Design Intent may result in water accumulation, overspray, or overflow within the internal guttering system.

The number and size of downpipe spigots within the system are determined in accordance with AS/NZS 3500.3. Outdoor Blinds and Awnings Australia Pty Ltd does not guarantee against leaks, overspray, or gutter overflow if the downpipe spigot design, gutter fall, and water dispersion/reticulation are not strictly adhered to according to the Water Reticulation Design Intent specified by Outdoor Blinds and Awnings Australia Pty Ltd.

The information contained in this document is proprietary to Outdoor Blinds and Awnings Australia Pty Ltd, and the company reserves the right to make changes to the information, products, and services at any time without notice.

Design Intent Statement - For The Supply of Power

Product

MED TWIST
MED OPRA

Company

Outdoor Blinds and Awnings Australia

Statement

Outdoor Blinds and Awnings Australia Pty Ltd does not offer any warranty, representation, or assurance regarding alterations to the original design of the Outdoor Blinds and Awnings - MED Twist Series Opening Aluminium Louvred Roof System.

Concerning the location and type of power supply (dependent on project inclusions), confirmation is necessary after a site visit. It is crucial that the power setup aligns with the specifications provided by Outdoor Blinds and Awnings for the project, as communicated during the project manager's site visit. Failure by the client to complete or agree to the specified works related to power supply may result in Outdoor Blinds and Awnings reserving the right to withhold the supply and installation of the Outdoor Blinds and Awnings system(s).

Power Location: Motor power is typically (always verify with the supplied GA drawing) situated on the high side of the louvre blades, with the cable protruding from the vertical plane of the support frame and aligned with the center of the louvre blades (on the high side), positioned 450mm back from the opposite end to the opening blade.

Cable Specification (for remote operation only): 2 x Core + Earth, 1mm Round Flex (critical to use 1mm round flex), with a 1.5M service tail (ensure proper sealing of the cable penetration through the frame).

Outdoor Blinds and Awnings Australia Pty Ltd does not guarantee any works that fall outside the AS/NZS 3000 standards. The information within this document is exclusive to Outdoor Blinds and Awnings Australia Pty Ltd, and the company retains the right to modify the information, products, and services at any time without prior notice.

Dulux Powder Coating Warranty

Suitable substrates

Dulux Alumi Shield™ warranties are available for architectural aluminium applications, including perforated and expanded aluminium, on approved specifications when applied by a Dulux Accredited Powder Coater to the warranty specification for the following project types:

	 NON-HABITABLE	 RESIDENTIAL <4 LEVELS	 RESIDENTIAL >3 LEVELS	 LIGHT COMMERCIAL <4 LEVELS	 COMMERCIAL >3 LEVELS	 PRESTIGIOUS COMMERCIAL	 MONUMENTAL
INTERIOR	•	•	•	•	•	•	•
EXTERIOR	•	•	•	•	•	•	•

- Non-habitable projects are those that are not dwelling types. Examples can be furniture, bus shelters, signage etc.
- Residential properties < 4 levels are typically easy to maintain, given their height and access.
- Light commercial projects <4 levels are sheltered from neighbouring buildings, but require greater durability due to higher usage and wear.
- High-rise residential and commercial projects are less sheltered from neighbouring buildings, raising their exposure and reducing their ease of maintenance.
- Prestigious commercial projects attract attention and require high quality finishes to uphold the longevity and design requirements.
- Monumental projects attract the most attention and have the highest standards required to uphold the reputation and protection expected from landmark sites.

Dulux Alumi Shield™ Warranty

PROTECTION YOU CAN COUNT ON





Warranty benefits

A Dulux Alumi Shield™ warranty is made up of two key components, a colour warranty (for fade and chalking) and a durability warranty (film integrity).

Durability Warranty	Colour Warranty
 <p>The Alumi Shield™ Durability warranty is your assurance of film integrity. The powder coating will not peel, crack or flake for the warranty period from the date the product is applied to the metal.</p>	 <p>The Alumi Shield™ Colour warranty is your assurance that the colour integrity will be maintained. It is made up of two components:</p> <ul style="list-style-type: none"> • Fade¹ • Chalk²

Terms and conditions apply

- Dulux Alumi Shield™ warranties are your assurance that the coating will not:
 - Fade** – Colour fade testing will give a delta E (Hunter) laboratory reading less than five units from the original colour in accordance with ASTM D2244.
 - Chalk** – Not exceed a rating of 2 for whites & pastels and a rating of 3 for deep colours as assessed in accordance with AS1580.481.1.11 test method.
- The Alumi Shield™ durability warranty is your assurance the powder coating won't peel, crack or flake for the warranty period from the date the product is applied to the metal.
- Warranties are only valid when applied by a Dulux Accredited Powder Coater to the warranty specification on recommended project types and conditions.

All Dulux premium powder coat products are backed by product specific Alumi Shield™ warranties. Below is an overview of the warranty periods by product available from Dulux

	Warranty	Fluoraset	Electro	Duratec	Protecture	Precious	Duralloy
Alumi Shield™ Warranty	Aluminium Durability	35 Years	25 Years	25 Years	15 Years	10 Years	10 Years
	Aluminium Colour	30 Years	15 Years	20 Years*	15 Years	10 Years	10 Years

*Excludes Intensity – 15 Years.

Important design considerations

Dulux Alumi Shield™ warranties are available on a wide range of fabricated architectural aluminium items, but those items must be designed, prepared (pre-treated), coated, fabricated and installed to standard ensuring that the item is fully protected.

It is essential that any item that is coated must be designed and fabricated to ensure:

- **It meets key standards** – Refer to AS 2312.1 and the relevant building code.
- **Protection is a key consideration at the early stages of design** – The design should allow the item to be prepared for coating correctly and that the minimum thickness of the specified coating can be achieved.
- **Exposed areas are appropriately sealed to last the duration of the warranty** – It is essential that the choice of other materials that contribute to protection such as sealants should be made to ensure that a Alumi Shield™ warranty is not void due to the sealants failure. This is important if only one side of a section of metal is to be coated, or if a section is cut exposing the raw metal, as it must be sealed to protect the non-coated area from the environment, i.e. not exposed to moisture, air and excessive heat. Should the seal fail, and a claim is made for an Alumi Shield™ warranty project the warranty for the area affected will be void as the integrity of the seal is not the responsibility of Dulux.
- **The following design elements are avoided** – Narrow crevices, poor air circulation, depressions, sharp edges and corners, large flat ledges (not window ledges), intermittent welding, undrained flat surfaces, unsealed hollow sections, flat surfaces in loose contact where moisture may be drawn in between them by capillary action or where water and foreign matter will lodge, as these areas may result in premature failure of the coating system.
- **Failure caused by post formed or post fabrication processes are avoided** – Please be aware warranties shall not apply to areas where a failure is caused from post formed or post fabrication processes, such as metal perforation, welding, cutting or any other circumstances beyond the reasonable control of Dulux. Many post fabrication processes can impede achievement of a continuous layer of pre-treatment and the minimum film build of powder coating. Where there is doubt please consult the relevant guideline or regulation such as the building code or window association for information on mitigating any potential damage that could be caused by post fabrication processes.

Project suitability

It is important to define your project correctly to ensure the correct standard of product is specified and the performance and warranty is able to be gained for your project.

Product suitability by project

Use the following table to help identify the product choice you have to gain an Alumi Shield™ warranty on your project. Refer to the conditions information to determine the environment that your project will be exposed to.

Project, Environment and Conditions			Fluoraset ¹		Electro ²	
Project Type	Environment	Conditions	Durability Warranty	Colour Warranty	Durability Warranty	Colour Warranty
			Monumental	Exterior	Mild, Severe	35 Years
Prestigious Commercial	Exterior	Mild, Severe	35 Years	30 Years	25 Years	15 years
Commercial Developments (>3 Levels)	Exterior	Mild, Severe	35 Years	30 Years	25 Years	15 years
Light Commercial Developments (< 4 Levels)	Exterior	Mild, Severe	35 Years	30 Years	25 Years	15 years
Residential (>3 levels)	Exterior	Mild, Severe	35 Years	30 Years	25 Years	15 years
Residential (<4 levels)	Exterior	Severe	35 Years	30 Years	25 Years	15 years
Residential (<4 levels)	Exterior	Mild	35 Years	30 Years	25 Years	15 years
Non Habitable	Exterior	Severe	35 Years	30 Years	25 Years	15 years
Non Habitable	Exterior	Mild	35 Years	30 Years	25 Years	15 years
All Projects	Interior	Moderate Interior	35 Years	30 Years	25 Years	15 years
All Projects	Interior	General Interior	35 Years	30 Years	25 Years	15 years

*Duratec Intensity – Colour Warranty 15 Years

Alumi Shield™ warranties

Alumi Shield™ warranties are available, in line with the following stipulations:

- Alumi Shield™ warranties are available when applied by a Dulux Accredited Powder Coater to the warranty specification on recommended project types and conditions
- All Dulux powder products are NOT suitable in strongly acidic or caustic environments, so the pH must be between 5 and 9.

Impact of distance to the sea

1. Fluoraset may be suitable in locations <10m from the high tide line e.g. harbours (contact Dulux for advice).
2. Electro, Duratec and Protecture are only suitable for environments >10m from the high tide line.
3. Duralloy and Precious is only suitable for environments >100m from the high tide line.

Conditions

Use the following table which references AS 2312.1, AS 4312 and ISO 9223 to identify the environment, conditions and atmospheric corrosivity categories. To pinpoint your projects corrosivity zone this table should be used together with the corrosivity zone maps contained within AS 4312.

Environment	Conditions	Corrosivity Zone	Aluminium Corrosion Rate (g/m ²) ⁴	Example Environments
Exterior Environment	Mild	C2 Low	≤ 0.6	Arid, dry, urban, inland, city
		C3 Medium	0.6 – ≤ 2.0	Light Industrial, geothermal (>500m from source) ¹ and inland coastal (mild sea spray zone)
	Severe	C4 High	2 – ≤5	Sea shore (medium sea spray zone), offshore Islands ³ and or geothermal (<500m from source) ²
		C5 Very High Marine & Industrial	5 – ≤10	Sea shore (high sea spray zone e.g. surf), offshore Islands ³ and heavy industrial

Top Coat Choice							
Duratec ²		Protecture ²		Precious ³		Duralloy ³	
Durability Warranty	Colour Warranty	Durability Warranty	Colour Warranty	Durability Warranty	Colour Warranty	Durability Warranty	Colour Warranty
-	-	-	-	-	-	-	-
25 Years	20 Years*	-	-	-	-	-	-
25 Years	20 Years*	-	-	-	-	-	-
25 Years	20 Years*	15 years	15 years	-	-	-	-
25 Years	20 Years*	15 years	15 years	-	-	-	-
25 Years	20 Years*	15 years	15 years	-	-	-	-
25 Years	20 Years*	15 years	15 years	10 Years	10 Years	10 Years	10 Years
25 Years	20 Years*	15 years	15 years	-	-	-	-
25 Years	20 Years*	15 years	15 years	10 Years	10 Years	10 Years	10 Years
25 Years	20 Years*	15 years	15 years	-	-	-	-
25 Years	20 Years*	15 years	15 years	10 Years	10 Years	10 Years	10 Years

Perforated and expanded aluminium

Alumi Shield™ Warranties on perforated and expanded aluminium are available for products recommended for the indicated projects, environments and conditions above. Powder Primers may be necessary as detailed below:

- Interior** – General interior conditions (E-Prime™ base coat not mandatory); Moderate Interior (E-Prime™ base coat mandatory).
- Exterior** – Mild (E-Prime™ base coat not mandatory); Severe: (E-Prime™ basecoat mandatory).

Other considerations

All Dulux powder products are NOT suitable in strongly acidic or caustic environments so the pH must be between 5 and 9.

Please refer to interior and exterior environments close to liquids considerations on page 6 for warranty implications where powder coatings may be in close proximity to liquids other than the sea.

Please refer to Geothermal considerations on page 6 for warranty implications.

Environment	Conditions	Corrosivity Zone	Aluminium Corrosion Rate (g/m ²) ⁴	Example Environments
Interior Environment	General Interior	C1 Very Low	Negligible	Dry interiors (homes, offices, shops)
		C2 Low	≤ 0.6	Minor condensation (warehouses, sports halls)
	Moderate Interior	C3 Medium	0.6 – ≤ 2.0	High moisture (dairy and food processing plants, breweries, and commercial laundries)
		C4 High	2 – ≤5	Significant contamination (swimming pools)

- Geothermal environments greater than 500m of a bore, mud pool, steam vent, or other source with a pH between 5 and 9. For a pH outside this consult Dulux.
- Geothermal hot spots within 500m of a bore, mud pool, steam vent, or other source.
- All offshore islands including Waiheke Island, Stewart Island, Fraser Island and Pacific islands e.g. PNG, Fiji, Samoa, Tonga, Tahiti, Noumea

- The corrosion rates for the first year of exposure for the different corrosivity categories of aluminium are determined by the following standard:
 - ISO 9223 - Corrosion of metals and alloys – Corrosivity of atmospheres – Classification, determination and estimation.

Important warranty considerations

Your warranty can also be impacted by its proximity to liquids other than the sea and geothermal environments whilst a regular care and maintenance program must be implemented for warranty compliance.

Environments close to liquids other than coastal, river and lake salt water environments

Please refer to the guidance below for your product choice and to understand the warranty limitations in all environments where powder coated assets are close to liquids other than coastal, river and lake salt water environments (e.g. near swimming pools, fountains, or showers).

	Chemically Treated ¹	Clean Tap, Fresh or Potable Water	Salt Water ¹	Other
Fluorset	◆	●	◆	Seek advice from Dulux Call 13 24 99
Electro	◆	●	◆	
Duratec	◆	●	◆	
Protecture	◆	●	◆	
Precious	○	●	✓	
Duralloy	○	●	✓	

1. Aggressive liquids such as chemically treated liquids and salt water must be cleaned off immediately as per the Dulux Care and Maintenance guide.

Please note chemically treated water includes antimicrobial treatments, e.g. in pools, anti-corrosive chemicals, and soapy water in bathrooms and showers.

◆ Where indicated Alumi Shield™ warranties are available on areas >than 1m from the liquid.

✓ Where indicated Alumi Shield™ warranties are available on areas >than 2m from the liquid (i.e. outside the splash zone).

○ Where indicated Alumi Shield™ warranties are available on areas >1m from the liquid on interior applications and >2m on exterior applications.

● Where indicated Alumi Shield™ warranties are available any distance from the liquid.

All Dulux powder products are NOT suitable in strongly acidic or caustic environments so the pH must be between 5 and 9.

Alumi Shield™ warranties are not available if the powder coating is immersed in any liquid.

Geothermal considerations

For powder coated assets close to geothermal zones, the choice of product is dependent on the level of geothermal activity and specifically the distance from the geothermal source. For those close to geothermal activity (within 500m of the source) powder coating products that are highly durable, super durable or ultra-durable can be considered. For areas that are more than 500 metres beyond the geothermal source, and have been assessed using the smell test as having minimal or non-existent geothermal influence, the standard corrosion zones and distance from liquid or salt water environments apply.

*Distance to Geothermal Environment	Fluorset	Duratec	Electro	Protecture	Precious	Duralloy
Less than 500m from source	✓	✓	✓	✓	×	×
Greater than 500m from source	✓	✓	✓	✓	✓	✓

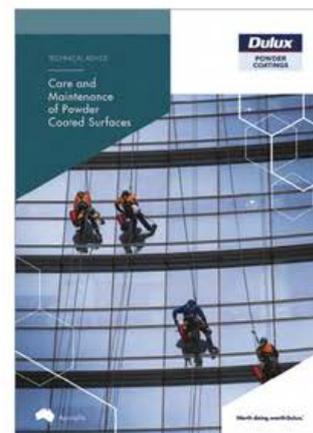
* Distance from bore, mud pool, steam vent, or other source with a pH between 5 and 9. For a pH outside this consult Dulux.

Care and maintenance

Care and maintenance is essential for warranty compliance

To ensure the life of your asset is maximised and to comply with Dulux Alumi Shield™ and Steel Shield™ warranty requirements, a simple and regular maintenance program must be implemented and recorded in line with the Dulux Care and Maintenance of Powder Coated Surfaces brochure.

For more information refer to the Dulux Care and Maintenance of Powder Coated Surfaces brochure visit duluxpowders.com.au/tech-advice



Technical requirements for Alumi Shield™ warranty

AAMA Standards

With over 50 years of experience, the AAMA (American Architectural Manufacturer's Association) is regarded as the standards leader for finishes on architectural aluminium. The AAMA objective is to develop and improve quality standards, encourage research & development and set benchmarks for product performance of architectural products. For finishing of architectural aluminium, Dulux recommend three internationally recognised AAMA standards, AAMA 2603, 2604 and 2605 for projects types across all BCA Classes.

Project, Environment and Conditions			AAMA Standard			
Project Type	Environment	Conditions	Meets AAMA 2605	Meets AAMA 2604	Exceeds AAMA 2603	Meets AAMA 2603
Monumental	Exterior	Mild, Severe	●			
Prestigious Commercial	Exterior	Mild, Severe	●	●		
Commercial Developments (>3 Levels)	Exterior	Mild, Severe	●	●		
Light Commercial Developments (< 4 Levels)	Exterior	Mild, Severe	●	●	●	
Residential (>3 levels)	Exterior	Mild, Severe	●	●		
Residential (<4 levels)	Exterior	Severe	●	●	●	
Residential (<4 levels)	Exterior	Mild	●	●	●	●
Non Habitable	Exterior	Severe	●	●	●	
Non Habitable	Exterior	Mild	●	●	●	●
All Projects	Interior	Moderate Interior	●	●	●	
All Projects	Interior	General Interior	●	●	●	●

Specifying powder coatings that comply with one of the AAMA standards removes all doubt for the fabricator and applicator. The standards spell out the level of both colour performance and film properties required. The Dulux powder coating products that meet or exceed these standards are shown below.

	Fluoraset	Electro	Duratec	Protecture	Precious	Duralloy
AAMA 2605	●					
AAMA 2604	●	●	●			
AAMA 2603	●	●	●	○	●	●
Coating Type	Ultra Durable Fluoropolymer	Super Durable Polyester	Super Durable Polyester	Highly Durable Polyester	Durable Polyester	Durable Polyester

● Meets standard ○ Exceeds standard

Dulux Accredited Powder Coaters

Only Dulux Accredited Powder Coaters are able to issue our Dulux Alumi Shield™ warranties after demonstrating their capability to meet stringent quality conditions and international standards. Warranties are only valid when applied by a Dulux Accredited Powder Coater to the warranty specification on recommended projects, and subject to specified warranty terms and conditions.



Care & Maintenance of Powder Coated Surfaces

The frequency of recommended cleaning will vary depending on:

- The environment – if it is dry, has minor condensation, has high moisture or has significant contamination (interior); or a city, rural, industrial or coastal environment (exterior)
- The conditions – if it is a general or moderate condition (interior) or a mild or severe condition (exterior) Some of the influencing factors that can impact the life of the powder coating include:
 - Ultra violet light from the sun
 - Levels of atmospheric pollution including salts, dirt, grime that can all accumulate over time
 - Winds carrying airborne debris that can cause erosive wear of the coating e.g. sand causing abrasion
 - Change in environmental circumstances e.g. if rural became industrial
 - Microclimates e.g. geothermal, alkaline or acidic

Recommended care and maintenance schedule

It is advised that in environments with minimal salt, pollutants, and urban factors, cleaning should occur at least once every twelve months. However, in regions where high levels of salts, pollutants, and corrosive elements are prevalent, such as beachfront residences or industrial zones, a more frequent cleaning regimen of at least every six months is recommended.

Areas shielded from elements might experience increased degradation due to accumulation of wind-blown salt, debris, or pollutants that may adhere to surfaces and persist despite rainfall. These areas might necessitate more frequent cleaning.

If noticeable pollutants are present on surfaces, a more frequent cleaning schedule is advisable.

To categorize the environment and atmospheric corrosivity levels, refer to the table correlating with AS 2312.1, AS 4312, and ISO 9223. This table, alongside corrosivity zone maps found within AS 4312, can help specify your project's environmental conditions.

THREE STEPS TO CLEANING POWDER COATED / ANODISED SURFACES

1. Eliminate loose deposits with a wet sponge, avoiding surface scratches by refraining from dry dusting.
2. Clean the powder coating using a soft, clean cloth and a mild detergent dissolved in warm water to remove dust, salt or other deposits.
3. After cleaning, always rinse with fresh water to eliminate any residual detergent.

As a warranty requirement all products are required to be cleaned regularly as outlined above / below.

Conditions	Corrosivity Zone	Example Environment	Recommended Minimum Cleaning
Mild	C2 Low	Arid, dry, urban, inland, city	Every 12 months
	C3 Medium	Light industrial, geothermal (>500m from source) and inland coastal (mild sea spray zone)	Every 12 months
Severe	C4 High	Sea shore (medium sea spray zone), offshore Islands and or geothermal (<500m from source)	Every 6 months
	C5 Very High	Sea shore (high sea spray zone e.g. surf), offshore Islands, Heavy Industrial	Every 3 months
General Interior	C1 Very Low	Dry interiors (homes, offices, shops)	Every 12 months
	C2 Low	Minor condensation (warehouses, sports halls)	Every 12 months
Moderate Interior	C3 Medium	High moisture (dairy and food processing plants, breweries, and commercial laundries)	Every 12 months
	C4 High	Significant contamination (swimming pools)	

The Do's and Don't of protecting your powder coating

Do:

- **Protect all powder coated joinery.**
 - When building, renovating, plastering or painting around powder coated assets use approved tapes and films in accordance with the manufacturers instructions.
- **Remove unwanted paint and sealants.**
 - Ensure all paint splatter or excess sealant are immediately removed before they dry.
- **Use recommended solvents for stubborn stains only.**
 - Use only Isopropyl alcohol (IPA) or methylated spirits and rinse off with clean water.
- **Regularly Inspect.**
 - Inspect your powder coating often and clean more regularly if required.
- **Clean in temperatures below 25 degrees celsius**
 - Clean powder coated surfaces when the surface temperatures are below 25 degrees Celsius.

Don't:

- **Use aggressive solvents or products applied to the surface.**
 - Do not use turpentine, white spirits, thinners, kerosene, citrus based cleaners or other aggressive solvents or products.
- **Rub powder coated surfaces excessively.**
 - Do not rub powder coated surfaces excessively, especially metallic finishes.
- **Neglect recommended care and maintenance schedules.**
 - To comply with Dulux Alumi Shield™ and Steel Shield™ powder coating warranties the recommended care and maintenance schedules must be adhered to.
- **Clean temperatures above 25 degrees celsius.**
 - Do not clean powder coated surfaces when the temperature is above 25 degrees celsius.

Non approved solvents or products can cause damage that may not be visible immediately and may take up to twelve months to appear.

For full details on Alumi Shield™ and Steel Shield™ warranties including terms and conditions: Visit duluxpowder.com.au/warranties

Motor Information



LINEAR ACTUATORS

LA23

Powerful linear actuator with compact design to fit into narrow spaces. A high push/pull force makes it ideal for almost any application.



Some of the benefits the LA23 offers you are:

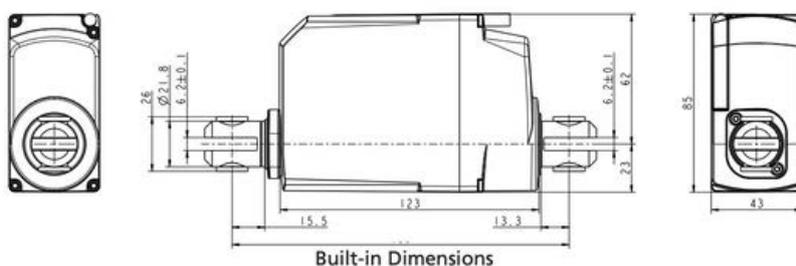
- Compact design
- High lifting force
- Exchangeable cables
- Available with basic ICT[™] functionality - including integrated H-bridge and flexible feedback options (TECHLINE only)
- Max. thrust: 2,500 N
- Max. speed: 12.6 mm/s

LINAK[®] industrial actuators offer a versatile array of movement solutions for pergolas.

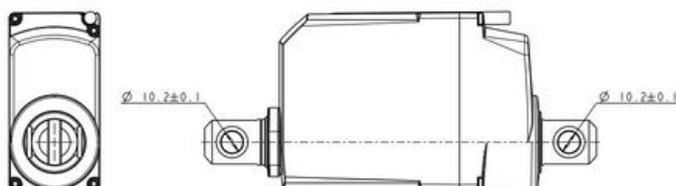
Operating temperatures between **-40°C to +85°C** make them fit for work in numerous settings.

With **thrusts up to 15,000 N, max speeds up to 160 mm/s, and strokes between 20 and 999 mm**, the actuators are highly adaptable for a wide variety of applications.

Industrial actuators with **heavy-duty aluminium housings** are very suitable for use in corrosive environments. Having been thoroughly salt spray and chemical resistance tested and approved for ratings up to **IP66 and IP69K static**, these actuators will work reliably for years, even when exposed to salt, water, wind, and sun.



Back fixture orientation
Option 1



Back fixture orientation
Option 0

PRODUCT DATA SHEET

Sikaflex® PRO

Sealant for concrete and masonry facades

DESCRIPTION

Sikaflex® PRO is a 1-component, moisture-curing, elastic joint sealant.

USES

Sikaflex® PRO is designed for movement and connection joints on porous substrates as well as indoor and outdoor general sealing applications.

CHARACTERISTICS / ADVANTAGES

- Movement capability of ± 25 (ASTM C 719)
- Good workability
- Good adhesion to many substrates

PRODUCT INFORMATION

Composition	Polyurethane
Packaging	310 ml cartridge, 12 cartridges per box 600 ml foil pack, 20 foil packs per box
Shelf life	Sikaflex® PRO has a shelf life of 12 months from the date of production, if it is stored in undamaged, original, sealed packaging, and if the storage conditions are met.
Storage conditions	Sikaflex® PRO shall be stored in dry conditions, where it is protected from direct sunlight and at temperatures between +5 °C and +25 °C.
Colour	White, Off White, Sandstone, Pale Brown, Japan Beige, Grey, Dark Grey, Brick Red, Redwood, Black, Dark Amber
Density	1.25 kg/l approx. (ISO 1183-1)

TECHNICAL INFORMATION

Shore A hardness	25 approx. (after 28 days) (ISO 868)
Secant tensile modulus	0.35 N/mm ² approx. at 100% elongation (23 °C) (ISO 8339) 0.50 N/mm ² approx. at 100% elongation (-20 °C)

SUSTAINABILITY

- LEED EQc 4.1
- SCAQMD, Rule 1168
- BAAQMD, REg. 8, Rule 51

APPROVALS / CERTIFICATES

- AS/NZS 4020:2018 - Water Potable Approved
- ISO 11600 F 25 LM
- ASTM C 920 class 25

Tensile strain at break	750% approx.	(ISO 37)
Movement capability	± 25% ± 25%	(ISO 9047) (ASTM C 719)
Elastic recovery	90% approx.	(ISO 7389)
Tear propagation resistance	5.5 N/mm approx.	(ISO 34)
Service temperature	-40 °C to +70 °C	

Joint design The joint width must be designed to suit the joint movement required and the movement capability of the sealant. The joint width shall be ≥ 10 mm and ≤ 40 mm. A width to depth ratio of 2:1 must be maintained (for exceptions, see table below).

Standard joint widths for joints between concrete elements

Joint distance [m]	Min joint width [mm]	Min. joint depth [mm]
2	10	10
4	15	10
6	20	10
8	30	15
10	35	17

All joints must be correctly designed and dimensioned in accordance with the relevant standards, before their construction. The basis for calculation of the necessary joint widths are the type of structure and its dimensions, the technical values of the adjacent building materials and the joint sealing material, as well as the specific exposure of the building and the joints.

For larger joints please contact our Technical Service Department.

APPLICATION INFORMATION

Consumption	Joint length [m] per 600 ml foil pack	Joint width [mm]	Joint depth [mm]
	6	10	10
	4	15	10
	3	20	10
	2	25	12
	1.3	30	15

Sag flow	0 mm (20 mm profile, 50 °C)	(ISO 7390)
Ambient air temperature	+5 °C to +40 °C, min. 3 °C above dew point temperature	
Substrate temperature	+5 °C to +40 °C	
Backing material	Use closed cell, polyethylene foam backing rods.	
Curing rate	3 mm/24 hours approx. (23 °C / 50% r.h.)	(CQP 049-2)
Skinning time	170 minutes approx. (23 °C / 50% r.h.)	(CQP 019-1)
Tooling time	150 minutes approx. (23 °C / 50% r.h.)	(CQP 019-2)

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

FURTHER INFORMATION

- Material Data Sheet (SDS)
- Pre-treatment Chart Sealing & Bonding
- Method Statement Joint Sealing
- Method Statement Joint Maintenance, Cleaning and Renovation
- Technical Manual Facade Sealing

IMPORTANT CONSIDERATIONS

- Sikaflex® PRO can be over-painted with most conventional facade coating paint systems. However, paints must first be tested to ensure compatibility by carrying out preliminary trials (e.g. according to ISO technical paper: Paintability and Paint Compatibility of Sealants). The best over-painting results are obtained when the sealant is allowed to fully cure first. Note: non-flexible paint systems may impair the elasticity of the sealant and lead to cracking of the paint film
- Colour variations may occur due to exposure to chemicals, high temperatures and/or UV-radiation (especially with the colour shade white). However, a change in colour is purely of aesthetic nature and does not adversely influence the technical performance or durability of the product.
- Do not use Sikaflex® PRO on natural stone.
- Do not use Sikaflex® PRO on bituminous substrates, natural rubber, EPDM rubber or on any building materials which might bleed oils, plasticizers or solvents that could attack the sealant.
- Do not use Sikaflex® PRO to seal joints in and around swimming pools.
- Do not use Sikaflex® PRO for joints under water pressure or for permanent water immersion.
- Do not expose uncured Sikaflex® PRO to alcohol containing products as this may interfere with the curing reaction.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

The substrate must be clean, dry, sound and homogeneous, free from oils, grease, dust and loose or friable particles. Sikaflex® PRO adheres without primers and/or activators.

However, for optimum adhesion and critical, high performance applications, such as on multi-story buildings, highly stressed joints, extreme weather exposure

or water immersion, the following priming and/or pre-treatment procedures shall be followed:

Non-porous substrates

Aluminium, anodised aluminium, stainless steel, galvanised steel, powder coated metals or glazed tiles have to be cleaned and pre-treated using Sika® Aktivator-205, wiped on with a clean towel. Before sealing, allow a flash-off time of > 15 minutes (< 6 hours). Other metals, such as copper, brass and titanium-zinc, also have to be cleaned and pre-treated using Sika® Aktivator-205, wiped on with a clean towel. After the necessary flash-off time, use a brush to apply Sika® Primer-3 N and allow a further flash-off time of > 30 minutes (< 8 hours) before sealing the joints. PVC has to be cleaned and pre-treated using Sika® Primer-215 applied with a brush. Before sealing, allow a flash-off time of > 30 minutes (< 8 hours).

Porous substrates

Concrete, aerated concrete and cement based renders, mortars and bricks shall be primed using Sika® Primer-3 N applied with a brush. Before sealing, allow a flash-off time of > 30 minutes (< 8 hours).

For more detailed advice and instructions please contact the local Sika Technical Services Department.

Note: Primers are adhesion promoters. They are neither a substitute for the correct cleaning of a surface, nor do they improve the strength of the surface significantly.

APPLICATION METHOD / TOOLS

Sikaflex® PRO is supplied ready to use. After the necessary substrate preparation, insert a suitable backing rod to the required depth and apply any primer if necessary. Insert a foil pack or cartridge into the sealant gun and extrude Sikaflex® PRO into the joint making sure that it comes into full contact with the sides of the joint and avoids any air entrapment. Sikaflex® PRO sealant must be firmly tooled against the joint sides to ensure adequate adhesion. It is recommended to use masking tape where exact joint lines or neat lines are required. Remove the tape within the skin time. Use a compatible tooling agent (e.g. Sika® Tooling Agent N) to smooth the joint surfaces. Do not use tooling products containing solvents. If Sikaflex® PRO is dry-tooled it shows a slightly structured, concrete-like surface. If it is wet-tooled (using a compatible tooling agent, e.g. Sika® Tooling Agent N) it shows a smooth surface.

CLEANING OF EQUIPMENT

Clean all tools and application equipment immediately after use with Sika® Remover-208 and/or Sika® Top-Clean T. Once cured, residual material can only be removed mechanically.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from

country to country. Please consult the local Product Data Sheet for the exact product data.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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