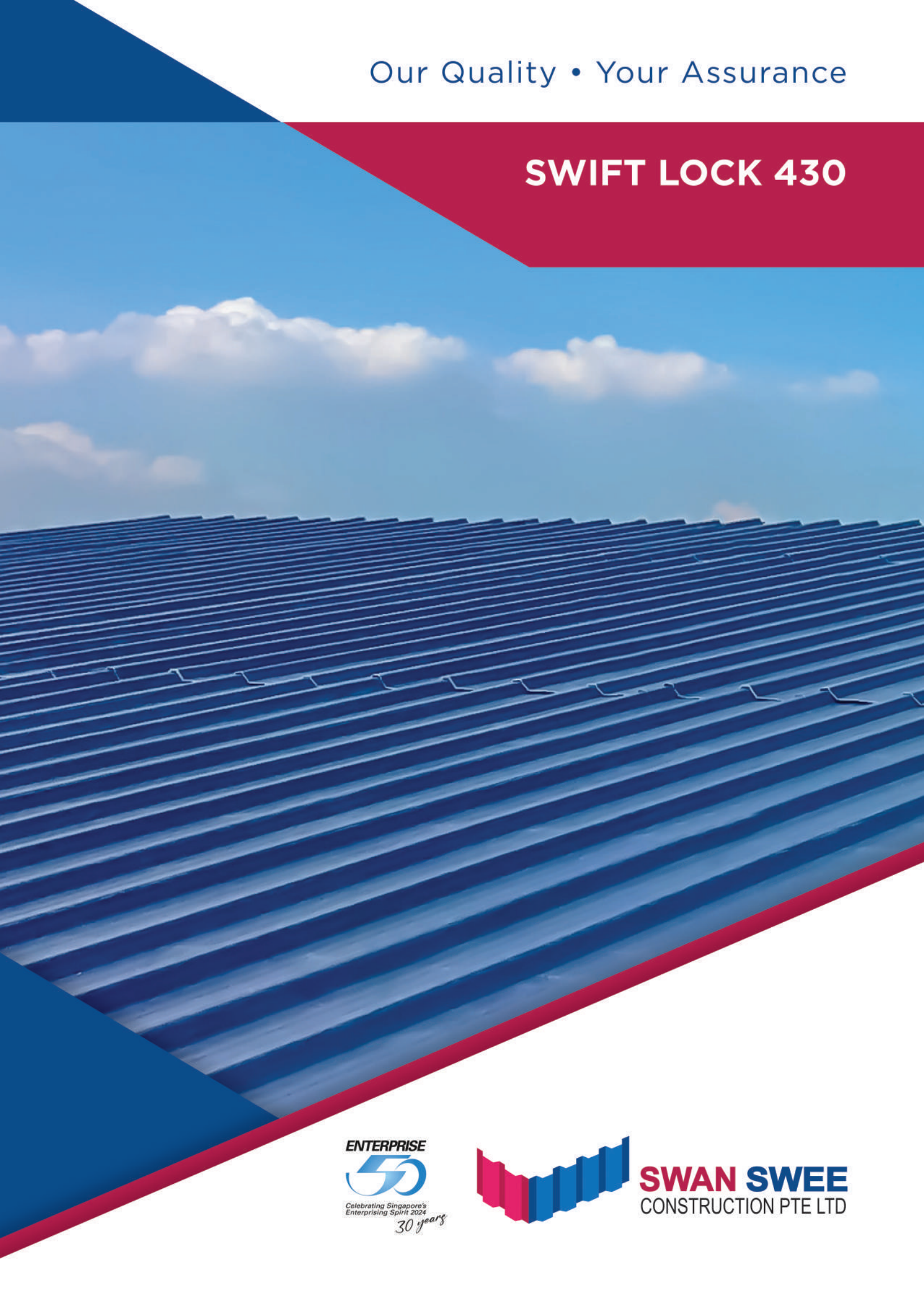


Our Quality • Your Assurance

# SWIFT LOCK 430



**SWAN SWEE**  
CONSTRUCTION PTE LTD

# ABOUT SWAN SWEE



## SWAN SWEE CONSTRUCTION PTE LTD WAS ESTABLISHED IN 1992

Since its establishment in 1992, Swan Swee Construction Pte Ltd has been a trusted name in the manufacture and supply of premium color-coated steel building products. Our comprehensive product portfolio includes painted steel roofing, wall cladding, galvanized high-tensile structural floor decking, galvanized high-tensile purlins, and a wide array of additional steel solutions such as crimp curved profiles, flashings, louvre panels, ventilators, and translucent sheeting.

These high-performance products are engineered to meet the diverse needs of commercial, industrial, residential, and urban developments, ensuring reliability and durability across applications.

At Swan Swee, we take pride in delivering a seamless supply chain experience. With extensive stock levels and a well-established distribution network, we align our operations with our customers' construction schedules, ensuring materials are delivered on-site precisely when needed.

Our commitment to quality is underscored by a rigorous inspection and testing framework. We ensure every product complies with stringent regulatory requirements, technical standards, and codes of practice while exceeding customer expectations.

## SWAN SWEE SWIFT LOCK 430

### The Ultimate Roofing Solution

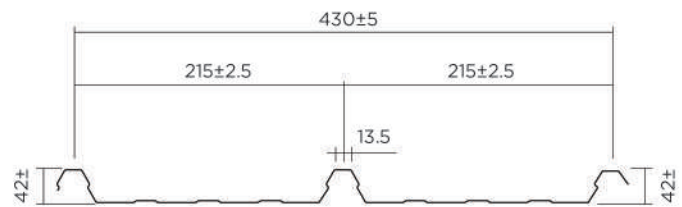
Swift Lock 430 offers a seamless blend of functionality and aesthetics, tailored to meet even the most demanding design requirements. With responsible sourcing certifications, it aligns perfectly with your commitment to sustainability without compromising on quality.



## SWAN SWEE SWIFT LOCK 430

### DESIGNED FOR ARCHITECTURAL EXCELLENCE

Swift Lock 430 is more than a roofing solution – it is a statement of precision, durability, and aesthetic integrity. Designed to complement innovative architectural visions, it seamlessly blends form and function, ensuring a roofing system that enhances both structural performance and visual appeal.



### WHY CHOOSE SWIFT LOCK 430

#### ARCHITECT-CENTRIC FEATURES & BENEFITS

- Sleek, Concealed Fixing System
- No visible fasteners for clean architectural lines
- Fixing clips securely attach to steel or timber without perforating the sheets, maintaining structural integrity

#### OPTIMIZED RAINWATER DRAINAGE & WATERPROOFING

- Wide-fluted and high-ribbed profile accelerates rainwater dispersion, ideal for regions with high rainfall intensity.
- Ensures efficient runoff, reducing water accumulation risks and enhancing longevity.

#### EXCEPTIONAL WEATHER RESISTANCE

- Lightweight yet structurally robust for superior wind resistance.
- Advanced coatings prevent corrosion, discoloration, and tropical dirt staining, maintaining long-term aesthetics with minimal maintenance.

#### ARCHITECTURAL BENEFITS

- Certified to Singapore & International Building Standards for compliance assurance.
- Produced under rigorous processes adhering to ISO9001 Quality Management System and ISO 14001 Environmental Management System.
- Authenticity guaranteed with product certification and warranty-backed reliability.

# MATERIAL SPECIFICATION

## BASE STEEL GRADE

The Swan Swee Swift Lock 430 is roll-formed from **G550 MPa steel**, ensuring high strength and durability for reliable performance.

## BASE STEEL COATING

Coating type	Definition
<b>AZ200</b>	The base steel is coated with a coating of 55% aluminium, 43.3% zinc and 1.6 % silicon (approximately), meeting the coating class requirements set by Australian Standard AS1397:2021. This advanced coating provides exceptional corrosion resistance and enhances the steel's durability.
<b>ZM310</b>	<p>The base steel is coated with a special metallic composition of 5% aluminium, 1% magnesium (approximately) and 94% zinc as determined by EN10346:2015.</p> <p>The inclusion of magnesium creates a self-healing effect, improving corrosion resistance in aggressive conditions like C4 zones. This makes ZM310 a compelling alternative particularly in demanding projects.</p>

## STEEL THICKNESS

	Standard	Non-Standard
Base Metal Thickness (BMT)	0.48 mm	0.60 mm
Total Coated Thickness (TCT)	0.54 mm	0.66 mm

## WEIGHT

Paint Type	ColorLume SMP®		ColorLume PVDF®		ColorMax™	
	Weight (kg/m <sup>2</sup> )		Weight (kg/m <sup>2</sup> )		Weight (kg/m <sup>2</sup> )	
Total Coated Thickness (TCT)	0.54	0.66	0.54	0.66	0.54	0.66
AZ200	5.71	7.00	5.70	7.03		
ZM310					5.84	7.18

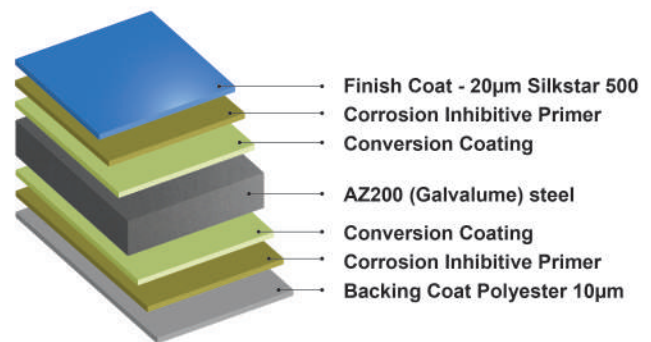
**Swan Swee Swift Lock 430** offers three premium paint systems, each engineered to meet distinct project demands. Whether you require exceptional durability, striking aesthetics, or specialized protection, our coatings provide superior performance and a flawless finish, ensuring longevity and reliability

## ColorLume® SMP (Silicone Modified Polyester) (Silkstar™500)#

**SILKSTAR® 500**, one of the high durable series, is a standard coil coating system designed exclusively for the metal roofing industry suited for climatic conditions in Singapore.

**Top Coat: AkzoNobel SMP (Silkstar™500)** – a trusted industry-standard coating recognized for its versatility, durability, and lasting aesthetic quality.

**Base Steel Coating: AZ200** – a premium alloy coating offering superior corrosion resistance and long-term durability in demanding conditions



**Applications:** Well-suited for architectural, residential, commercial, and industrial projects.

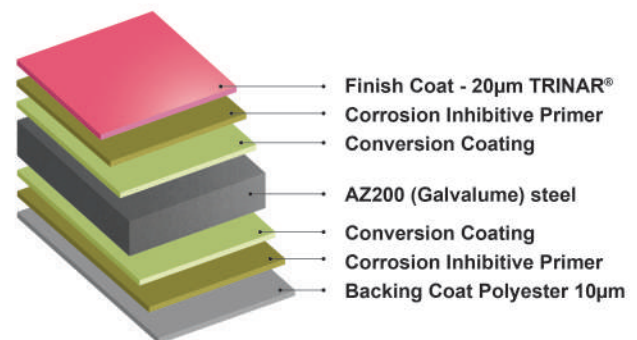
**Benefits:** A cost-effective yet high-performance solution that balances visual appeal with robust protection across diverse environments.

## ColorLume® PVDF (TRINAR®5000)#

**AkzoNobel TRINAR® 5000** brand is manufactured from raw materials which conform with 70/30 standard ratio (PVDF/ ACR) in market.

**Top Coat: AkzoNobel PVDF (TRINAR®5000)** (fluoropolymer coating with ≥70% PVDF).

**Base Steel Coating: AZ200** – providing enhanced corrosion resistance for long-term durability.



**Applications:** Roofing systems requiring outstanding color retention, weather resistance, and long-term protection against fading and chalking.

**Benefits:** Maintains its aesthetic appeal even under intense UV exposure and extreme weather conditions, ensuring lasting vibrancy.

### Key Considerations for Specifying PVDF Coatings

To ensure optimal performance: Choose a **70% PVDF coating system** that complies with **AAMA 621-02** for steel substrates. Testing confirms that PVDF coatings deliver peak durability at **70%** concentration - higher ratios do not offer additional benefits.

### Beware of lower-quality formulations:

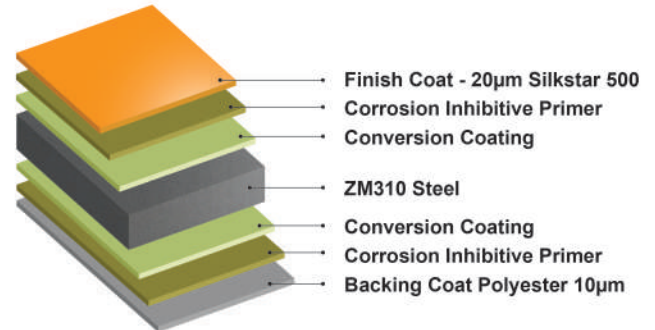
Some manufacturers offer 50% or even 30% PVDF coatings (which may contain Kynar or Hylar-branded PVDF), but these fail to meet AAMA 2605-13 standards and exhibit significantly reduced performance. (Source: AkzoNobel)

#ColorLume® SMP & PVDF - Trademark of Yieh Phui Taiwan

## ColorMax™ - High-Performance Coating for Harsh Environments#

**Top Coat: AkzoNobel Silkstar 500** - Delivers exceptional durability, weather resistance, and long-lasting color vibrancy.

**Base Steel Coating: ZM310** - Provides superior corrosion protection, ensuring structural resilience in extreme environments.



**Applications:** ColorMax® is a specialized coil and substrate coating engineered to endure aggressive conditions, including C4 corrosion zones as classified by ISO 12944 - Atmospheric Environment Categories.

**Benefits:** Guaranteed Performance Warranty: 20-year warranty ensuring lasting film integrity 15-year coverage against fading and chalking

#ColorMax™ - Trademark of Yieh Phui Taiwan

## THE FUNCTION OF SUBSTRATE COATING IN AN INTEGRATED PAINTING SYSTEM

### Substrate Coating System: 2C2B (Two-Coat, Two-Bake) Process

A two-sided 2C2B coating system (two coats, two bakes) offers superior durability and protection for steel substrates. This advanced process optimizes both finish quality and longevity through precise layering and curing.

#### Key Features:

Two-sided application for complete protection  
Double-coating and double-baking process for enhanced durability  
High-quality finish with extended service life

#### Optimized Pre-Treatment for Superior Paint Adhesion

To maximize adhesion, the paint film undergoes specialized pre-treatment tailored to the production equipment used:

**Bonderite®** (Chemical SA, France) or  
**Surfcoat®** (Nippon Paint, Japan)

These advanced treatments clean, coat, and protect the steel substrate, ensuring a strong foundation for paint adhesion and long-term durability.

#### Top Primer: Polyurethane (PU) Anti-Corrosion Layer

**Type:** High-performance polyurethane primer  
**Dry Film Thickness:** 5 microns (nominal)

#### Key Benefits:

- Superior anti-corrosion protection
- Strengthens adhesion for topcoats
- Extends overall system lifespan
- Preserves surface integrity in harsh conditions

#### Back Primer & Back Coat

A PU back primer with strong anti-corrosion properties is applied, followed by a **polyester backing layer** that offers: **10-micron nominal dry film thickness**

#### Key Benefits:

- Excellent anti-corrosion performance
- Added durability for the reverse surface
- Extended product lifespan

**Important Note:** While effective for protection, this back coat is not designed for direct sunlight exposure, as it primarily serves a functional role rather than aesthetic enhancement.

## The significance of Performance Testing in Roofing Coatings.

Conducting performance tests on roofing coatings is essential to ensure durability, weather resistance and overall effectiveness. These evaluations assess the coating's ability to withstand environment factors such as UV exposure, moisture, temperature fluctuations and mechanical stress. By rigorously testing coatings, manufacturers and industry professionals can validate compliance with international standards, enhance material longevity, and optimise protective properties.

## Performance Test Results

The following tests evaluate the **adhesion, durability, corrosion resistance, and overall performance** of the coating system:

### Adhesion Tests

#### Reverse Impact (ASTM D2794):

A 500g hammer impacts the surface, followed by a tape peel test.

The film remains intact with no flaking.

#### T-Bend (ASTM D4145):

The material is bent 180° to a 3T diameter, then subjected to a tape peel test.

The film adheres well, without flaking.

#### Erichsen Test (ASTM 643):

A 7mm deep shape is formed at 12±6 mm/min velocity, followed by a 3M #600 tape peel test.

No flaking occurs.

### Solvent & Chemical Resistance

#### Solvent Resistance (ASTM D5402):

100 wipes using M.E.K. solvent under 1kg pressure.

The painted steel substrate remains unaffected.

#### Chemical Resistance (Spot Test ASTM D1308):

Exposure to 5% H<sub>2</sub>SO<sub>4</sub> and 5% NaOH for 24 hours

Shows no visible changes.

### Durability & Corrosion Resistance

#### Salt Spray Test (ASTM B117/SS 5 Part G10):

1,000 hours exposure.

No red rust, blisters (better than 6F), or corrosion in the unscrapped area.

#### Weathering Test (QUV ASTM G154/SS 5 Part G9):

1,000 hours exposure.

No visible color change or chalking.

#### Resistance to Chalking (QUV 2,000 hours):

Chalk rating ≤ 4.

Demonstrating excellent durability.

### Gloss Level & Fire Classification

#### Gloss Level

(ASTM D523/SS 5 Part E1/BS-2003/EN 13523-2):

Nominal gloss level of 25 GU at 60° reflection angle.

#### Fire Classification (EN 13501):

Class A1 compliant.

Non-combustibility and no harmful smoke emissions.

These results confirm the high-performance capabilities of the coating system, offering long-term durability, adhesion strength, and environmental resistance.

**Inspired Colour for Your Roof**

At Swan Swee, we believe your roof is more than just a cover—it is a statement. With ColorLume® SMP; ColorLume® PVDF and ColorMax™, we bring a full spectrum of vibrant and durable color options to complement your architectural vision.

No matter the hue you imagine, we provide a refined selection of colours designed to enhance both aesthetic appeal and long-term performance, ensuring your project stands out while enduring the elements.

**(SMP / PVDF / ColorMax™)**



**Prestige Titanium Grey**  
TDR: 18.14%  
TE: 0.86 SRI: 10.70



**Prestige Light Grey**  
TDR: 45.10%  
TE: 0.86 SRI: 28.93



**Prestige Red**  
TDR: 15.20%  
TE: 0.87 SRI: 37.80



**Prestige Brown**  
TDR: 8.70%  
TE: 0.85 SRI: 27.30



**Prestige Green**  
TDR: 8.40%  
TE: 0.87 SRI: 11.00



**Prestige Blue**  
TDR: 14.50%  
TE: 0.86 SRI: 11.80

\*To ensure accurate colour representation, we recommend requesting physical samples for verification.

**Non Standard Colours**



**Prestige Emerald Green**  
TDR: 23.40%  
TE: 0.86 SRI: 35.27



**Prestige Black**  
TDR: 3.80%  
TE: 0.87 SRI: 5.60



**Prestige Off White**  
TDR: 61.19%  
TE: 0.87 SRI: 72.80



**Prestige Grandeur Blue**  
TDR: 14.78%  
TE: 0.86 SRI: 28.30



**Prestige Truffle Brown**  
TDR: 19.42%  
TE: 0.86 SRI: 36.35



**Prestige Dark Grey**  
TDR: 18.14%  
TE: 0.87 SRI: 10.70

\*To ensure accurate colour representation, we recommend requesting physical samples for verification.

**Ordering Guidelines**

To ensure accuracy in manufacturing and supply, please specify the required paint system when placing your order. This helps prevent any misalignment between your specifications and the final product.

For example: • Prestige Blue (SMP) • Prestige Blue (PVDF) • Prestige Blue (Color Max)

## SWIFT LOCK 430

TCT (mm)	BMT (mm)	Permissible Wind Pressure (kN/m <sup>2</sup> ) for Specified Span Below									
0.54	0.48	Max Span	600mm	900mm	1200mm	1500mm	1800mm	2100mm	2400mm	2700mm	3000mm
<b>Considering Strength</b>		Single Span	10.0	6.65	4.97	3.48	2.40	1.75	1.33	1.04	0.83
		Double Spans	7.36	4.32	2.88	2.08	1.57	1.23	0.98	0.81	0.67
		Three Spans	8.57	5.07	3.42	2.47	1.88	1.48	1.19	0.98	0.82

## SWIFT LOCK 430

TCT (mm)	BMT (mm)	Permissible Wind Pressure (kN/m <sup>2</sup> ) for Specified Span Below									
0.54	0.48	Max Span	600mm	900mm	1200mm	1500mm	1800mm	2100mm	2400mm	2700mm	3000mm
<b>Deflection limits but not exceeding strength</b>		Single Span	10.0	6.35	2.68	1.37	0.79	0.50	0.33	0.24	0.17
		Double Spans	7.36	4.32	2.88	2.08	1.57	1.20	0.81	0.57	0.41
		Three Spans	8.57	5.07	3.42	2.47	1.50	0.94	0.63	0.44	0.32

**Notes:** Deflection limited considered: (a) Continuous beams and single span beams: L/200 (b) Cantilever beams: L/180. No imposed loads have been considered. Only the permissible wind pressures which can be acted together with self-weight of the sheeting has been calculated.

TCT (mm)	BMT (mm)	Maximum Span (mm)	
0.54	0.48	Single Span	1700
		Double Spans (equal)	2300
		Three or more Spans (equal)	2150

**Based on average wind suction - 0.92 kN/m<sup>2</sup> ; maximum local wind suction - 1.97 kN/m<sup>2</sup>**

**Notes:** Deflection limits consider: (a) Continuous beams and single span beams: L/200 (b) Cantilever beams: L/180. The following parameters are assumed in the calculation of wind load. (i) Length & width of building 50m x 20m (ii) Height of building: 10 m (iii) Type of roof: mono-pitch roof (iv) slope of the roof: 15 degrees (v) terrain category. The wind load calculated (i) to (v) is wind suction (uplift), no imposed loads have been considered.

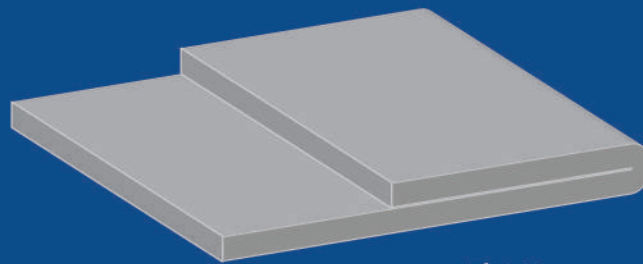
Ends spans and internal spans are assumed to subject to average wind suction and the cantilever spans are to be subjected to maximum local wind suction.

# FLASHING

## Protection for Roofing and Wall Cladding

Flashing is a crucial component of any roofing system, ensuring durability and protection against the elements. At Swan Swee, we take meticulous care in manufacturing our flashing to high-quality standards.

If needed, we can integrate a flat hem into the flashing design to accommodate specific project specifications. For further assistance, please reach out to our Sales Team.



Flat Hem

### Benefits of hemming:

- **Enhanced strength:** reinforces the sheet metal edge for increased durability.
- **Improved aesthetics:** provides a cleaner, more refined surface finish.
- **Defect concealment:** covers rough edges and burrs, ensuring a polished appearance.

Properly detailed Swan Swee roof and wall flashings enhance wet weather performance for both roofing and cladding systems.

Beyond functionality, precise flashing and detailing contribute to a refined and professional finish, improving the overall aesthetics of the installation.

Swan Swee provides a selection of standard flashing options and can also customize flashings to meet specific project requirements.

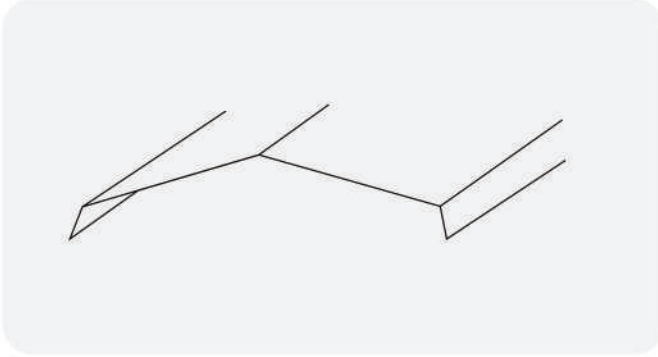
For complex or specialized flashing details, please contact our Sales Team for tailored solutions.



# TYPES OF FLASHING AND THEIR APPLICATIONS

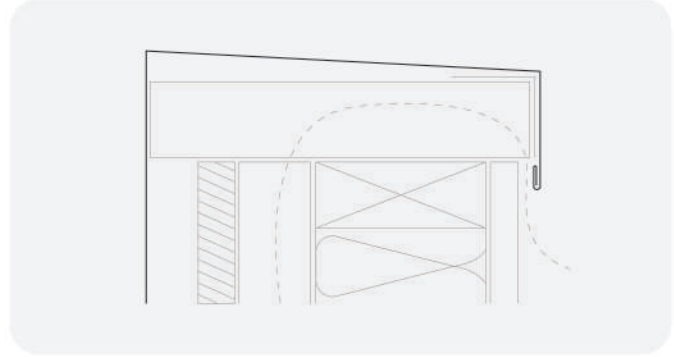
## Ridge or Hip Capping

Installed at the ridge where two roof planes meet, ensuring weatherproofing and seamless finish.



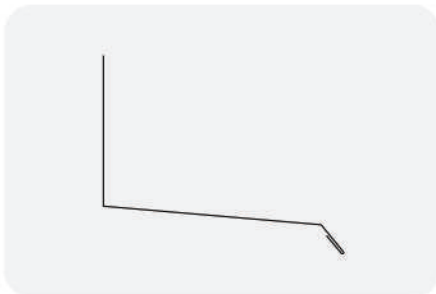
## Parapet Capping

Protects parapet wall tops from water infiltration



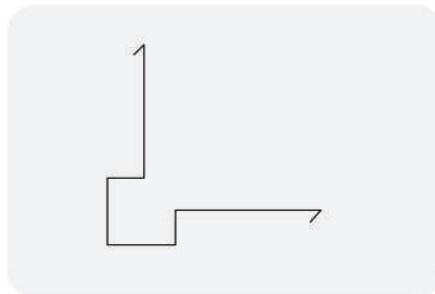
## Apron Flashing

Placed at the intersection between a roof and a vertical surface, like a wall to direct water floor.



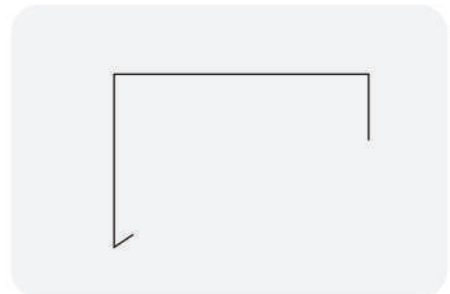
## Corner Flashings

Enhance weather resistance at wall intersections.



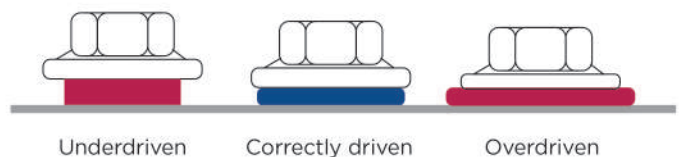
## Barge Capping

Provides a weather-resistant and visually pleasing finish to the gable ends of roofs.



## Setting of Screws

Sealant washer fasteners should be tightened just enough to ensure a secure, weather-tight seal. Over-tightening must be avoided, as excessive force can damage the sealing washer or deform the sheet, potentially compromising water resistance and leading to leakage.



## Ordering of Flashings

### Dimensions

Measure dimensions precisely, including angles and bends for proper fitting.

### Colour Side

Indicate which side of the sheet should display the colour, ensuring it aligns with the building's aesthetics.

### Lengths and Quantity

Specify the number of flashings required and their respective lengths.

# DIMENSIONAL TOLERANCES & FIXING CLIP

## FIXING GUIDELINES FOR SWIFT LOCK 430

All sheets are custom-cut to your specified dimensions with the following precision tolerances:

### Dimension Tolerance

Dimension	Positive Tolerance	Negative Tolerance
Length	+5mm	-5mm
Width	+3mm	-3mm

### Minimum Roof Pitch (Ensuring Effective Water Drainage)

Configuration	Pitch Requirement
Without end lap	2° (Approx. 1:30)
With end lap	3° (Approx. 1:20)

These guidelines help maintain performance and reliability in various installation conditions.

### Fastener Specifications

Utilize Class 3 or 4 fasteners in accordance with AS3566-2002 for enhanced durability and corrosion resistance.

Swift Lock 430	Steel Supports	
	Thickness	
	Up to 4mm	Exceeds 4.5mm
<b>Fix Directly to Support</b>	No. 10-24 x 16mm wafer head self-drilling and tapping screw	Teks 5 No. 12-24 x 32mm wafer head self-drilling and tapping screw
<b>Over Insulation Blanket</b>	Increase to 22mm or longer screw if required	Same as above
2 fasteners per clip (Class 3 or 4 )		

#### Insulation Fastening: Screw Length & Penetration

**Metal Supports:** Ensure a minimum of three threads extend past the support for a secure fit.

**Timber Supports:** Maintain the same penetration depth as a non-insulated installation to uphold structural integrity.

# INSTALLATION GUIDELINES

## Installation Guidelines

For all roof slopes, it is essential to form a turn-up at the upper end of each sheet to prevent water ingress and a turn-down at the lower end to enhance drainage.

To maximize protection against weather intrusion, sheets should be installed with the exposed edge of overlaps positioned away from the prevailing wind direction.

### 1. Clip Alignment & Fixing:

- Begin by securing the first row of clips, ensuring precise alignment.
- Each clip should be positioned with the “arrow” pointing in the direction of sheet laying.
- Check alignment using a string or laser guide for precision, especially for large-span roofing systems.

### 2. First Sheet Installation:

- Place the first sheet over the fixed clips and snap it into position, ensuring both the centre rib and female rib are securely engaged.
- Verify thermal expansion allowances, particularly for long sheet applications, to accommodate movement and prevent stress fractures

### 3. Subsequent Sheet Installation:

- Rotate the second row of clips into place over the male rib of the first sheet.
- Fasten each clip securely along the entire length, ensuring full engagement with the male rib.
- Incorporate measures to counter wind uplift forces, including reinforced fastening at critical zones to prevent sheet displacement in high-wind environments.

### 4. Finalizing Installation & Lifeline Integration:

- The last sheet requires a finishing clip over its male rib.
- Secure the finishing clip to both the purlin and the sheet rib, ensuring structural integrity and

- optimal performance.

- For lifeline system integration, confirm that designated anchor points align with structural reinforcements.

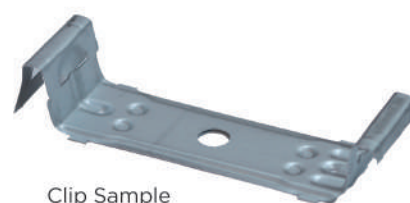
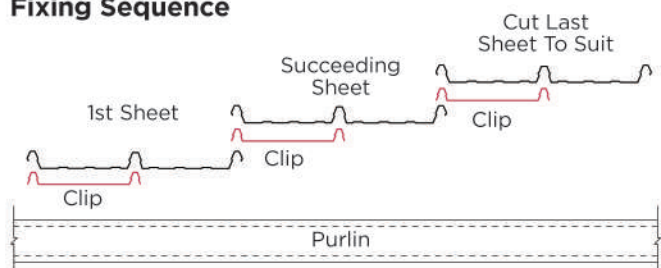
- Use certified fasteners to secure lifeline mounts while maintaining roofing material integrity and avoiding localized stress concentrations.

- If incorporating solar panel systems, verify load distribution and ensure roofing compatibility with mounting brackets to prevent structural compromises.

## Compatibility Check

Before installation, all products must be assessed for compatibility with adjacent materials. Evaluating potential interactions—both direct contact and water flow dynamics—is crucial to preventing issues such as corrosion, staining, or water damage. This proactive approach ensures durability and optimal performance across different material interfaces

## Fixing Sequence



# SEALANTS

## Recommended Sealants

Neutral-cure silicone sealant has been successfully applied to various steel finishes used in roofing, walling, flashing, and cappings made from the same materials as the cladding.

### Neutral-cure silicone sealants:

- Exhibit strong adhesion to clean surfaces of all roofing and walling materials.
- Are water-resistant and non-corrosive.
- Maintain flexibility under extreme temperature variations.
- Offer high resistance to ultraviolet (UV) radiation (sunlight).
- Have a long service life.

It is essential to use only neutral-cure silicone with sheet steel. Other types of silicone sealants, which often emit vinegar or ammonia odors, release aggressive by-products during curing that can degrade sheet steel.

If uncertain, check the sealant packaging for a statement such as: "Suitable for use with galvanized and Galvalume steel products."

## Surface Preparation

For optimal bonding, all surfaces must be clean, dry, and free from contaminants such as old sealant and oil.

**Cleaning agents:** Mineral turpentine is effective for cleaning surfaces, but all residual solvent must be completely removed using a clean, dry cloth. White spirits can also be used as an alternative.

**Application timing:** Sealant should be applied on the same day the surface is cleaned to ensure proper adhesion.

## Sealant Cleanup

With experience, you will be able to gauge the appropriate bead size, minimizing excess sealant and reducing cleanup efforts.

**Uncured sealant:** Can be removed using a clean, dry rag. Any remaining residue can be wiped off with a cloth lightly dampened with mineral turpentine or white spirits.

**Cured sealant:** Should be carefully removed using a plastic spatula to prevent damage to the metal's surface finish.

## Painting considerations

Avoid smearing silicone on surfaces intended for painting, as it can interfere with paint adhesion. If smearing occurs, lightly abrade the affected area using a non-metallic scouring medium.



## Safe Roof Walking Practices

To minimize the risk of damage and ensure safety when walking on roofs:

Always step on the pan and directly over structural supports for stability.

Wear smooth-soled shoes to prevent ribbed soles from collecting debris such as small stones, swarf, or other particles that could scratch or damage the roofing sheets.

Taking these precautions helps maintain both the integrity of the roofing system and personal safety.

## Cutting Roof Sheets – Best Practices

When cutting roof sheets:

Always cut on the ground, away from other materials, to prevent accidental damage.

Use a circular saw with a metal-cutting blade for safer and cleaner cuts. This method minimizes the production of damaging hot metal particles and reduces burr compared to using a carborundum disc.

Following these guidelines ensures a more precise cut and protects both the roofing sheets and surrounding areas.

## Removal of Metal Filings – Preventing Surface Damage

During installation, always remove metal debris resulting from sawing, drilling, or other construction activities by brushing or blowing it off from pre-painted roofing sheets.

If left unattended, metal filings will rust rapidly, causing staining or discoloration that affects the appearance and integrity of the roof's surface. Regular cleaning ensures a clean finish and prolongs the roof's aesthetic appeal and durability.

## Storage and Handling Guidelines

Ensure the product is kept dry and elevated off the ground to minimize the risk of damage.

Avoid dragging roof sheets to prevent scratches or harm to the painted surface.

Protect the material from debris and contaminants to maintain its quality and appearance during storage and handling.

## Length and Transportation Guidelines

Custom Lengths: Swift Lock 430 and wall cladding are supplied pre-cut to the required dimensions.

Standard Length Limitation: For standard deliveries, the material length should not exceed **12 meters**.

Special Transportation for Extended Lengths: Lengths greater than 12 meters necessitate specialized transportation and appropriate on-site handling facilities.

Regulatory Compliance: Always confirm to the **transportation limits set by LTA** (Land Transport Authority) to ensure adherence to regulations for long products. Proper planning ensures safe, efficient delivery and handling of the materials.



## Swan Swee Swift Lock 430 – The Perfect Roofing Solution for Solar Panels and Lifelines

The Swift Lock 430 profile is specifically designed to accommodate solar panel installations and lifeline systems. Its ridge configuration offers a strong and reliable anchoring point, ensuring secure attachment of solar panel clips for stable and safe installations.

This thoughtful design makes it an excellent choice for projects requiring both functionality and durability in roofing applications.

## Key Considerations for Installing Solar Panels on Your Home or Factory

When planning a solar panel installation, consider the following factors to ensure optimal performance and durability:

**Roof Pitch:** A suitable roof pitch is essential for proper rainwater runoff and efficient solar panel operation.

**Solar Panel Tilt Angle:** Adjust panels to the optimal tilt angle to maximize energy output based on your location.

**Air Ventilation:** Provide adequate ventilation around the panels to prevent overheating and maintain efficiency.

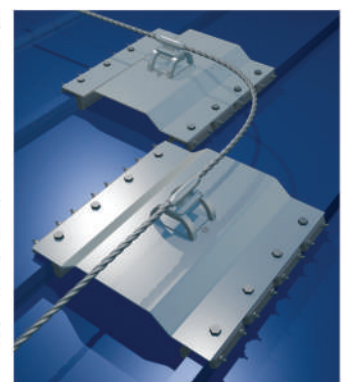
**Easy Maintenance Access:** Design the layout to allow convenient access for regular cleaning and maintenance, ensuring uninterrupted performance.

In **Singapore**, the average peak sun hours fall between 10:00 a.m. and 3:00 p.m., making this timeframe critical for maximizing solar energy generation. Proper planning can help you harness the region's abundant sunlight effectively.

## Lifeline Installation on Swift Lock 430

The lifeline system can be securely mounted by clamping onto the Swift Lock 430 profile ridge, ensuring a stable and reliable attachment.

To meet industry safety standards, the lifeline system must be designed and manufactured in compliance with EN795:2012 - Type C, guaranteeing performance, durability, and adherence to required safety regulations.



**IMPORTANT NOTE:** The information published in this brochure is as far as possible accurate at the date of publication, however, prior to application in a particular situation, **Swan Swee Construction Pte Ltd.** recommends that you obtain qualified expert advice confirming the suitability of product(s) in question for the application proposed.

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Talk to us about our competitive pricing and services.  
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