1.CHARACTER OF THE ISSUE - REQUIREMENTS

Waterproofing a metal roof is essential to mitigate vulnerabilities that may compromise its watertight integrity over time. Although metal is inherently durable, the assembly, which includes joints, fasteners, and protective layers, is susceptible to various environmental and mechanical stressors.

2.SOLUTION

The requirements are thoroughly met by the PC-WC PU Coating System. This polyurethane (PU) coating serves as a high-performance solution for metallic roofs, providing a seamless, flexible, and durable membrane that effectively addresses issues related to thermal movement and corrosion.

Solution Type:

PU based coating system .
Polyurethane Based Coating : **PC-Sealcoat ® 220**
Surface Priming : PC-Prime® EP 2C

3.COATING APPLICATION

3.1 Preparation of the substrate

The surface designated for coating must meet the following criteria:

It should be dry and stable.
It must be free of any materials that could hinder bonding, such as dust, loose particles, and grease.
It should be devoid of rust or any corrosion that may interfere with adhesion.

Depending on the substrate's characteristics, appropriate preparation techniques such as brushing, grinding, or sandblasting should be employed. Subsequently, the surface must be thoroughly cleaned to remove any dust.

3.2 Rust Removal and Passivation

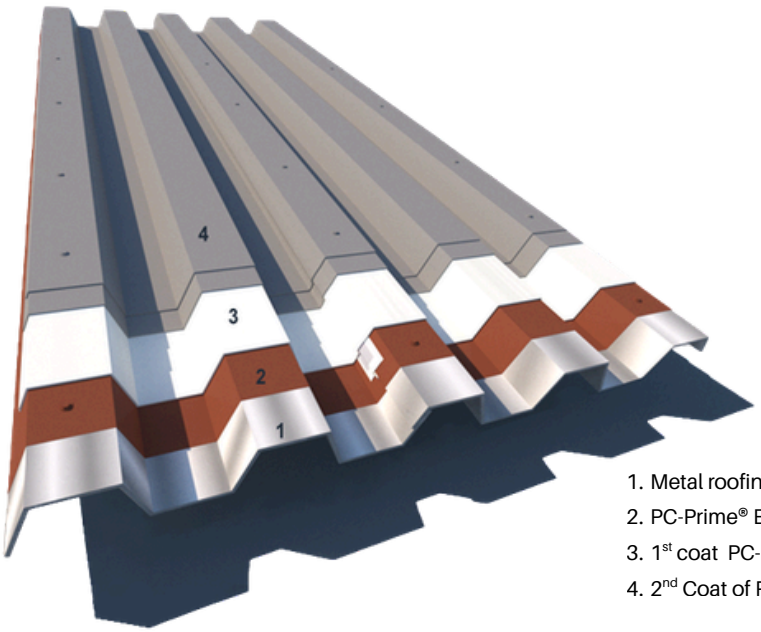
Rust Removal: Begin by applying **PC-Rustproof® RC**, a single-component liquid specifically formulated to eliminate rust and provide temporary protection against further oxidation. This product can be applied using either a brush or a spray. Allow the reddish corrosion to change to a near-black color, indicating effective removal.

3.2 Surface Priming

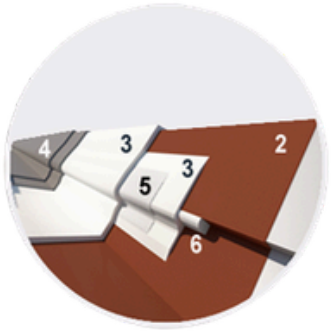
PC-Prime® EP 2C is applied in two layers using a roller, brush, or spray technique. The second layer should be applied after the first has dried, but within 24 hours. The recommended consumption rate is 150-200 g/m^2 per layer.

Following the application of **PC-Prime® EP 2C**, **PC-Sealcoat® 220** should be applied within the next 24 hours.

It is essential to seal the edges where the metal roof meets vertical elements such as parapets and stairwell terminations, as well as pipe joints, ventilation joints, metal element joints, connection joints between metal sheets or panels, screws, and joints on the substrate wider than 1 mm. This sealing should be done using the polyurethane sealants **PC-Sealants® PU 25**, 12 to 24 hours after the application of the epoxy primer.



1. Metal roofing sheet
2. PC-Prime® EP 2C
3. 1st coat PC-Sealcoat® 220
4. 2nd Coat of PC-Sealcoat® 220



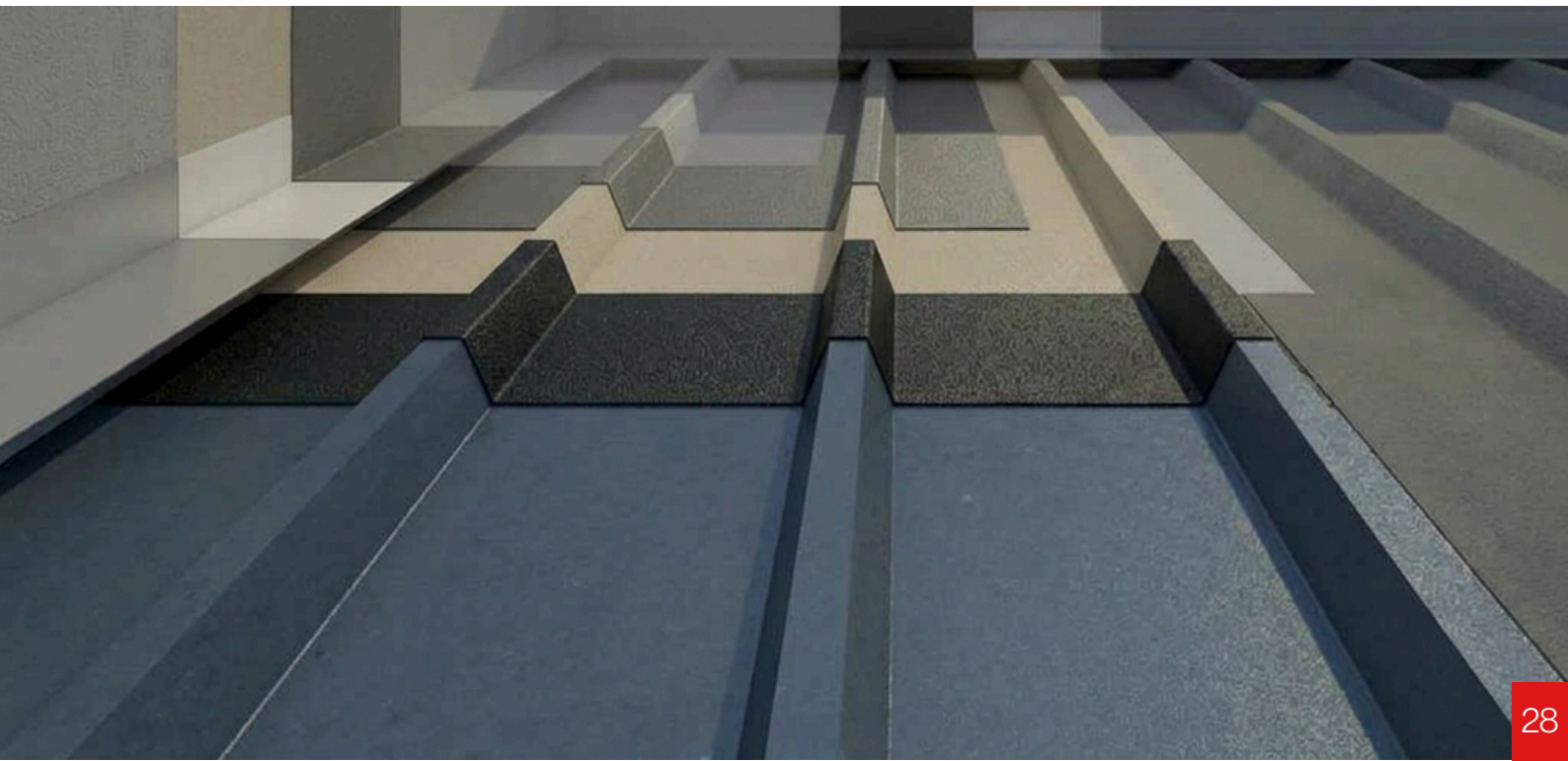
1. Metal roofing sheet
2. PC-Prime® EP 2C
3. 1st coat PC-Sealcoat® 220
4. 2nd Coat of PC-Sealcoat® 220
5. PC-Seal Tape® Flex

3.2 Application of PC-Sealcoat® 220

It is recommended to reinforce **PC-Sealcoat® 220** with **PC-Seal Tape® Flex**, a polyester fabric, along the edges where the metal roof intersects with vertical elements such as parapets, stairwell terminations, pipe joints, ventilation joints, and connections between metal sheets or panels.

After the epoxy primer, **PC-Prime® EP 2C**, has completely dried, apply a layer of the polyurethane waterproofing liquid membrane, PC-Sealcoat® 220, to the joints. While this layer remains wet, embed a 10 cm wide strip of polyester fleece (60 g/m^2) using **PC-Seal Tape® Flex**. Subsequently, apply a full layer of **PC-Sealcoat® 220** across the remaining surface. After allowing 8 to 24 hours for curing, depending on weather conditions, a second coat of **PC-Sealcoat® 220** should be applied. Following an additional 8 to 24 hours, a third layer can be applied specifically to the regions where reinforcement has been utilized to ensure complete coverage.

The total consumption of the polyurethane waterproofing liquid membrane, **PC-Sealcoat® 220**, is estimated to range from 1.0 to 1.5 kg/m^2, depending on the substrate.



4.KEY ADVANTAGE OF ROOF WATERPROOFING

Extended Roof Lifespan: It adds a protective layer against UV rays and extreme weather, potentially extending your roof's life by 10 years or more.

Significant Cost Savings: Proactive waterproofing is roughly Cheaper than a complete replacement and prevents expensive repairs for internal water damage.

Enhanced Energy Efficiency: Reflective coatings, like those from PC-Sealcoat SR , can lower surface temperatures by up to 34°C (93°F), reducing cooling costs by 15% to 50%.

Healthier Living Environment: By sealing out moisture, it prevents the growth of toxic mold and mildew, which are known triggers for asthma and allergies.

Increased Property Value: A certified waterproofed roof is a major selling point that can increase a property's market value by up to 20%.