

SPECIFICATION STATEMENT

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Tiger Steel NZ Ltd

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To The Shed Shop Ltd
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Material	Specification	Extra Details
Pre-painted Steel utilising a double sided Regular Modified Polyester Paint System from PPG (USA)	AS1397:2011 AS2728:2013 ASTM A792	Grade: G300 (Yield Strength minimum) Coating: AZ150 (Aluminium/Zinc)

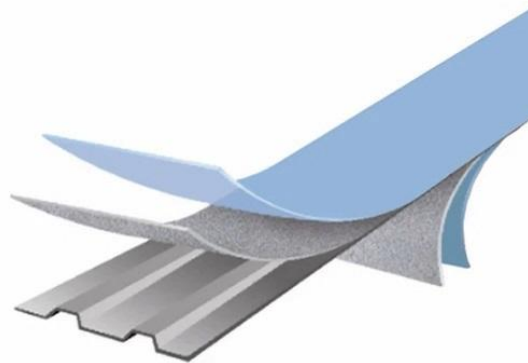
Tiger Steel NZ Ltd supplies The Shed Shop with Pre-painted Steel in coils and sheets, for fabrication into outdoor sheds, which they sell to the New Zealand market. The steel is sourced through mills based in South Korea due to their technologically advanced manufacturing facilities, which produce the highest quality pre-painted steel found worldwide.

The steel base material is 0.40mm thick and is protected by TIGERALZINC, which is a hot-dipped alloy coating of 55% Aluminum, 43.4% Zinc and 1.6% Silicon coating. It provides excellent corrosion resistance with the barrier protection of aluminum and sacrificial corrosion protection effect of zinc, making it suitable for commercial, residential and light industrial applications. Developed in the USA in 1962, it was found to have the best properties of zinc and aluminum coatings and has been found to be several times more corrosion resistant than galvanized steel, greatly increasing the service life.

TIGERALZINC™ 55% ALUMINIUM-ZINC STEEL

Layer System

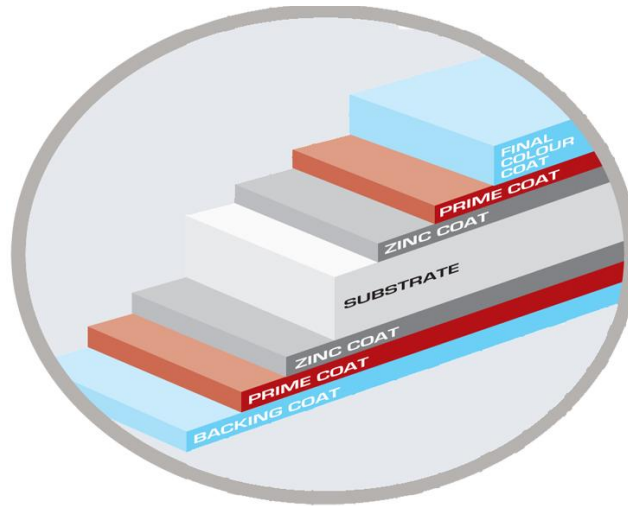
Anti-finger Print (organic resin)
TIGERALZINC Aluminium 55% Zinc 43.4% Silicon 1.6%
Base Steel
TIGERALZINC Aluminium 55% Zinc 43.4% Silicon 1.6%
Anti-finger Print (organic resin)



The paint which is baked onto the TIGERALZINC coating is supplied through PPG in the US. They are the world's leading supplier of paint systems to steel mills and they supply the Korean mills with the Regular Modified Polyester Paint (RMP) system, consisting of 25 microns on both top and bottom, as well as having a primer of 5 microns.

The industry standard specification for pre-painted steel supply is for only single sided paint for shed production, which is often found with kitset sheds. This is where only the top side is only covered by RMP, leaving the bottom side to have just the 5 microns of primer and no added corrosion protection of the paint. This results in the underneath/bottom side more vulnerable to corrosion. Tiger Steel has a unique system where our supplying Korean mills apply RMP to both the top side and the bottom side, providing protection to both sides of the sheet and greatly improving the corrosion resistance.

Below is a diagram showing the double-sided paint system, with the substrate being the base steel material, the zinc coat is the TIGERALZINC and the primer and colour coating on both top and bottom for Tiger Steel supply to The Shed Shop.



The production process has 12 stages as per below



step1 PAY OFF REEL GROUP
PAY OFF REEL GROUP



step2 PRE CLEANING
To eliminate foreign substances from the strip surface, hot alkali solution is sprayed onto the strip surface.



step3 ENTRY ACCUMULATOR SECTION
To compensate for the down time before the welding process, strip is accumulated at the entry section.



step4 CLEANING SECTION
Consists of 5 steps: clearing, brushing, rinsing, hot water rinsing, and final rinsing. While removing foreign substances from the strip, a chemical agent is applied to improve adhesive strength. Processing time of 7-9 seconds and length of 16 meters. (LS 120 MPM)



step5

FURNACE SECTION

Recovery of mechanical properties by annealing the strip to its re-crystallization temperature. Processing time of 170-190 seconds and length of 360 meters. (L/S 120 MPM)



step6

ZINC POT & WIPING SYSTEM

After coating zinc on the strip surface, the thickness of the plate is controlled through air blowing. Processing time of 0.8-1.3 seconds and length of 2 meters. (L/S 120 MPM)



step7

COOLING TOWER

Cooling the galvanized strip through air exposure prior to the Skin Pass Mill.



step8

SKIN PASS MILL

Illuminating the surface and improving the mechanical properties after temper rolling the strip with a maximum of 700 tons.



step9

TENSION LEVELLER SECTION

Flattening of the temper rolled strip surface through elongation. Processing time of 0.5-0.7 seconds and length of 2 meters. (L/S 120 MPM)



step10

POST TREATMENT

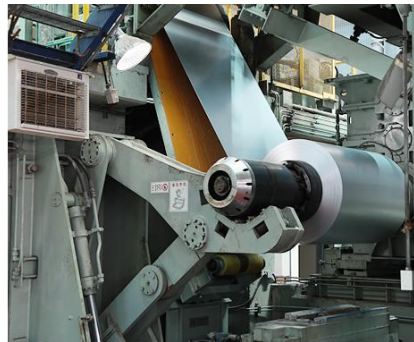
After applying chrome film to the surface, drying. Processing time of 2.5-4 seconds and length of 6 meters. (L/S 120 MPM)



step11

EXIT ACCUMULATOR

Strip is saved to compensate for the down time during coil cutting and slow down at the exit section.



step12

TENSION REEL GROUP

Cutting the plated strip and wrapping it into a final product. Cling can also be applied as necessary.