

Increased
corrosion protection
and **durability**



Corporate Profile

The Safal Group is the leading supplier of metal coated coils, pre-painted coils, metal roof sheeting and long steel products in Sub-Saharan Africa. The group was established to consolidate its African operations, with a focus in flat roofing products as its core business.

The Safal Group of companies have incorporated best business practices through Kaizen principles and innovative solutions to achieve world class manufacturing standards.

The Safal group is the first in Africa to have set up the Aluminium – Zinc coating technology. The technology used is referred to as Aluminum-Zinc (AZ) coating, this is done under license to BIEC. BIEC International Inc. is the worldwide licensor and acknowledged leader in technologies associated with 55% Al-ZN coated steel. All licensed AZ producers subscribe to the BIEC technology of which the Safal Group conforms. When used in the correct application, you can be assured of the following attributes:

- o **Considerable increase in service life**
- o **Superior thermal protection**
- o **Added aesthetic value**
- o **Cost effective solution**
- o **Eco-friendly credentials**

Innovative Technology

Modern innovation has taken steel to a new level.

ZincAL[®] provides for even longer service life and extends the durability of modern coated steel.

The technique of coating steel with an alloy of Aluminium and Zinc (55% Aluminium 43.4% Zinc and 1.6% Silicon) has been extensively researched and the proven performance surpasses that of traditional galvanised steel.

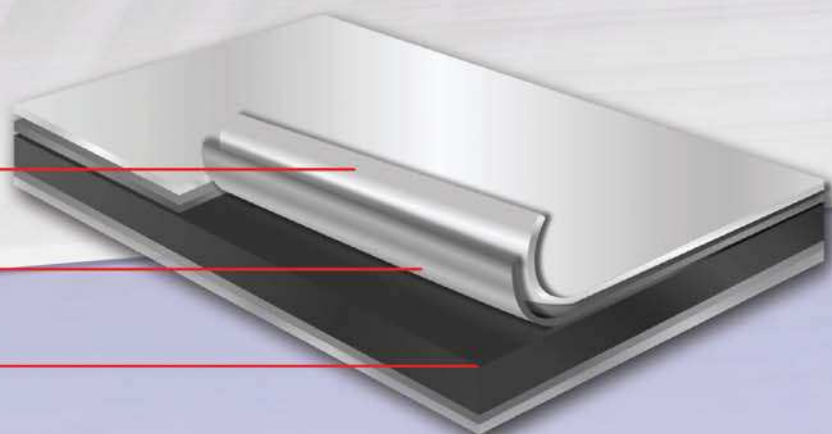
This chemical ratio represents the optimum point on the corrosion curve due to the sacrificial action of the Zinc content.

The application of the ZincAL[®] product will carry a tailor made warranty if prior application is made to Safal Steel.

Passivation

Al Zn Alloy

Steel Substrate



○ **Cross section of ZincAL[®]**

KEY BENEFITS

Considerable Increase of Service Life

State-of-the-art patented technology ensures up to 2-4 times increased service life as compared to traditional galvanised steel. The general guidelines as stated in product selection guide are based on the external environment or macro climate and will assist in selecting the ZincAL[®] product appropriate for your specific application.

Consideration should also be given to the internal or micro climate which may have an impact on the service life.

Resistance to Corrosion

The coating on ZincAL[®] (55% Aluminium 43.4% Zinc and 1.6% Silicon) protects the steel base in two ways: Firstly the aluminium components of the coating provides a tough physical barrier between the extreme atmospheric conditions and the inner core of steel. When water comes in contact during the coating process; an electrolytic reaction occurs automatically increasing the build-up of Zinc on cut edges; this is called galvanic action – which assists the cut edges from corrosion.

Enduring Performance

Safal will offer a warranty on ZincAL[®] for standard applications. Such warranties are available on request subject to pre-application and approval.

Mechanical Properties

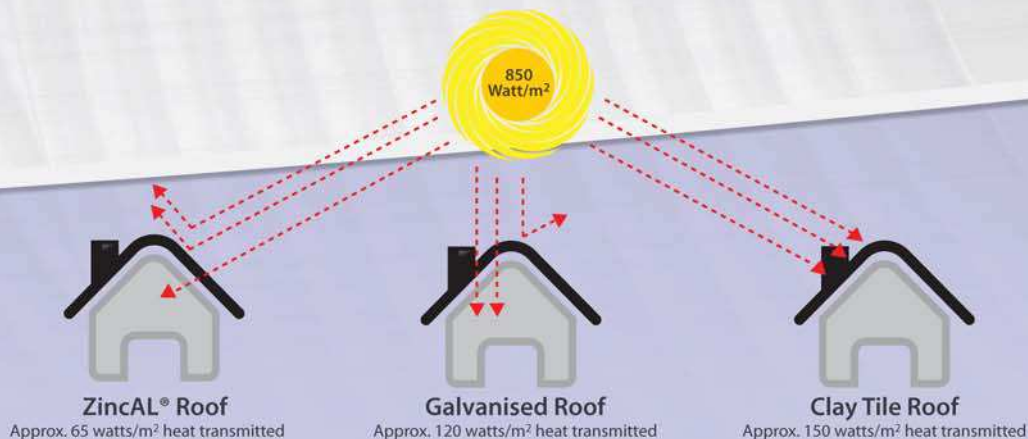
ZincAL[®] is produced according to the ASTM A792M-09a standards, this ensures specific international quality standards and tolerances are adhered to guaranteeing 'fit for purpose' steel. Good Manufacturing practises ensure strict adherence to standards thus ensuring worldclass quality.

Cost Effective Solution

With the above properties in mind it is easy to assess the value of the ZincAL[®] product based on it's life cycle costing. Typically one would expect to pay a substantial premium for a product that offers a service life of up to 4 times longer. Safal's modern technology and process equipment has ensured that these costs are reduced to a minimum. This enables Safal to offer ZincAL[®] to the market at a competitive price that guarantees the end user will benefit from the most cost effective roofing solution available on the market.

Yield Advantage

ZincAL[®] contains 55% Aluminium by weight that makes 80% of the alloy volume. This means that for the same coating thickness the coating mass is lower, offering more linear meters per metric ton of ZincAL[®] compared to galvanised steel.



Superior Thermal Protection

The Metallic finish of ZincAL® provides maximum heat reflectivity which keeps the interior of a building measurably cooler during the summer months and significantly warmer during the winter months. These thermal efficient properties give ZincAL® an advantage over traditional roofing products, such as galvanised steel, roofing tiles or asbestos cement.

ZincAL® can withstand an operating temperature of up to 350°C. This added benefit makes ZincAL® not only a superior roofing product but also a versatile product which can be applied in various engineering applications and uses.

Added Aesthetic Value

ZincAL® is the modern alternative in coated steel roofing, its unique spangle is aesthetically attractive. This presents unpainted roof sheeting as an appealing option for all types of building applications, whether it is a domestic, commercial or even an industrial project. ZincAL®'s distinctive uniform metallic finish is its signature on a project that guarantees long lasting appeal. Today's modern architect deserves to have a product that reflects their commitment to quality, durability and architectural brilliance, ZincAL® is their choice.



*Photographic Representation
of ZincAL® Spangle*

Eco-friendly Credentials

Steel roofing is 100% recyclable. Safal Group's manufacturing processes are designed and managed to eliminate harmful emissions and waste in an effort to protect the immediate environment. Our products also reflect this same company ethos and commitment to protecting the environment and as such reduce loading on HVAC systems through its superior thermal resistance thus reducing energy consumption. Safal's founding member status with Green Building Council of South Africa is a testament to its intentions and commitment to the environment.




For further information regarding our ZincAL® product and other quality brands kindly contact the applicable Mill in your country. *(Details on the back page)*

What are the direct comparative product attributes of AZ technology vs Galvanised technology?

- 0 Both products have excellent formability properties.
- 0 AZ considerably increases the service life of 2- 4 times that of Galvanised steel.
- 0 AZ possess both barrier and sacrificial protection to resist corrosion, whereas Galvanised steel relies mainly on sacrificial protection.
- 0 Both are a continuous hot dipped process adding consistency and uniformity to the coating application.
- 0 AZ offers better yield per ton than Galvanised.



Product Selection Guide

	ZONE 5: Low cost residential buildings in cities, towns, peri-urban and rural areas Atmosphere is generally clean, hardly any acid rain from SO ₂ /NO _x – includes most of Africa	ZONE 4: Smaller commercial and mid-range residential buildings in medium Cities and Towns Inland conditions	ZONE 3: Large commercial and industrial buildings and upper end Residential buildings in medium Cities Mild Marine conditions – the coastal area 5+ kms from the sea.	ZONE 2: Large commercial and industrial buildings in large cities. Moderate Industrial zones Marine zones less than 5 km from sea	ZONE 1: Large Commercial and Industrial buildings in Mega Cities eg Shanghai. (None in Africa) Severe industrial zones, high pollution, acid rain Severe marine zones less than 1 km from the sea, ie high rate of salt deposition Supplied on customer specification
AZ 100 					
AZ 150 					
AZ 200 					





Safal Group of Companies producing ZincAL®



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