



Inspired *by* nature

## 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 Aluminium-Zinc (AZ) coating, This is done under license to BIEC. BIEC International Inc. which 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. This technology combined with the latest coil coating technology; together with the Industries most respected paint suppliers, ensures the ColorPLUS® product is the most cost effective and durable option for pre-painted sheeting, used in buildings and general engineering applications.

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. ColorPLUS® provides for even longer service life and extends the durability of modern coated steel. The highly durable, modified polyester and PVdF coatings help to protect against harsh climatic conditions.

The technique of coating steel with an alloy of Aluminium and Zinc (55% Aluminium 43.5% Zinc and 1.5% 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 ColorPLUS® product will carry a tailor made warranty if prior application is made to Safal Steel.



### 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 within the Product Selection Guide are based on the external environment or macro climate and will assist in selecting the ColorPLUS® 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 metal coating on ColorPLUS® (55% Aluminium 43.5% Zinc and 1.5% Silicon) protects the steel core in two ways: Firstly the aluminium component of the coating provides a tough physical barrier between the extreme atmospheric conditions and the inner core of steel. Secondly, the Zinc in the coating offers cathodic protection to the steel base. Whilst the addition of the paint coating is generally known to add aesthetic value it will also enhance the durability and service life of the sheeting. High end products like PVdF coatings can be produced for project specific applications.

#### Enduring Performance

Safal will offer a warranty on ColorPLUS® in applications as agreed by them. Such warranties are available on request subject to pre-application and approval.

#### Mechanical Properties

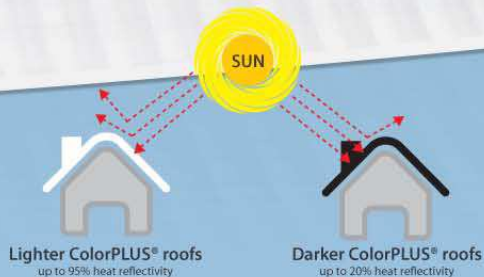
ColorPLUS® is produced according to the International ASTM A755/A755M standards. This ensures specific quality standards and tolerances are adhered to guaranteeing 'fit for purpose' steel. The flexibility of the paint coating ensures formability without compromising the integrity of the finish. The pre-treatment process combined with the primer acts as a chemical key which maximises adhesion and resists flaking and delamination during the forming processes. The coating system has been designed to withstand surface damage with professional handling during installation. Once installed the product renders resistance to scratching and damage due to normal maintenance procedures ultimately giving superior abrasive resistance properties.

#### Cost Effective Solution

With the above properties in mind it is easy to assess the value of the ColorPLUS® product based on its life cycle costing. Safal's modern technology and process equipment has ensured that these costs are reduced to a minimum. This enables Safal to offer ColorPLUS® 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

The metal coating on ColorPLUS® 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 ColorPLUS® compared to galvanised steel.



## Superior Thermal Protection

The colour finish of ColorPLUS® provides maximum heat reflectivity which keeps the interior of a building measurably cooler during the summer months and significantly warmer during the winter months. Lighter shades absorb less energy from sunlight, hence, providing a cooler substrate. This results in a reduction in loading on HVAC systems through its superior thermal resistance, thus reducing energy consumption in buildings in warmer climates.

ColorPLUS® possess great heat resistant properties this added benefit makes ColorPLUS® not only a superior roofing product but also a versatile product which can be applied in various applications and uses.

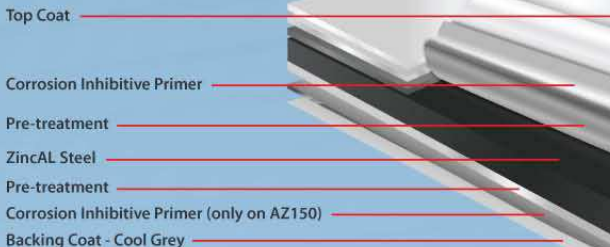
## Added Aesthetic Value

ColorPLUS® is the modern alternative in pre-painted steel roofing. ColorPLUS® is an appealing option for all types of building applications, whether it is a domestic, commercial or even an industrial project. Chalking resistance and gloss retention go hand in hand. Chalking occurs when the resin component of the coating starts to deteriorate. The technology used for this coating system is of the latest design and limits chalking of the coating. One of the greatest challenges facing industry professionals today is the issue of Colour fastness. As a result of many years of research and development the pigments used in this coating system have been carefully selected to avoid rapid colour change and remains fresh in appearance for many years. Resistance to dirt retention is becoming more of a concern with the increase in wind borne contaminants and dust particles. The advances in pre-painted coating technology today means that these modified polyesters have the inherent ability to resist dirt or contaminant retention, ensuring your building stays cleaner for longer.




## Eco-friendly Credentials

Steel roofing is 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. The paint coating is inert once cured and does not contain any substances that could harm the environment. Safal's founding member status of the Green Building Council of South Africa is a testament to its intentions and commitment to this.

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



○ Cross section of ColorPLUS®

		<b>ZONE 4:</b> Smaller commercial and mid-range residential buildings in medium Cities and Towns  Inland conditions	<b>ZONE 3:</b> Large commercial and industrial buildings and upper end Residential buildings in medium Cities  Mild Marine conditions – the coastal area 5+ kms from the sea	<b>ZONE 2:</b> Large commercial and industrial buildings in large cities  Moderate Industrial zones  Marine zones less than 5 km from sea	<b>ZONE 1:</b> 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 1km from the sea, ie high rate of salt deposition  Supplied according to customer specification
<b>Pre-Painted</b>	<b>Microns</b>				
AZ 100 (0.4mm>  	20 µm top coat  5 µm corrosion inhibitive primer  7 µm backing coat - cool grey				
AZ 150 (0.4mm>  	20 µm top coat  5 µm corrosion inhibitive primer  5 µm corrosion inhibitive primer  5 µm backing coat - cool grey				
AZ 200 (0.47mm+)  	Project specific				



Safal Group of Companies producing ColorPLUS®



**MRM**  
Mabati Rolling Mills Ltd

Old Mombasa Road,  
Athi River, Nairobi,  
Kenya, 00204/  
P.O. Box 271,  
Athi River, Nairobi,  
Kenya, 00204

Tel: +254 20 642 7000  
Fax: +254 20 642 7500  
Email: sales@mabati.com  
Website: www.mabati.com



**ALAF LIMITED**

Nyerere Road,  
Area Plot No. 18,  
Dar Es Salaam, Tanzania/  
P.O. Box 2070,  
Dar Es Salaam,  
Tanzania

Tel: +255 22 286 0010/5  
Fax: +255 22 286 4690/3077  
Email: sales@aluminiumafrica.com  
alaf@aluminiumafrica.com  
Website: www.aluminiumafrica.com



**SAFAL**  
STEEL (PTY) LTD

Safal Steel Metal  
Coating Complex,  
Old Main Road (R103),  
Cato Ridge, 3680, South Africa/  
P.O. Box 29240,  
Maytime Centre,  
Kloof, 3634, South Africa

Tel: +27 31 782 5500  
Fax: +27 31 782 1400  
Email: sales@safalsteel.co.za  
Website: www.safalsteel.co.za

