

Cool Roofing Metal

KEEP YOUR ROOF COOL!

COLOURCOIL'S PRODUCTS ARE NOT ONLY KEEPING THE ROOFS COOL BUT ALSO ENERGY EFFICIENT

COOL FACTOR

What is Colourcoil's contribution towards global green initiatives?

Keeping the planet's energy stream clean, efficient and affordable while preserving environment and quality of life is perhaps the greatest challenge of the 21st century. As energy costs spiral upward, so do the environmental consequences of pollution and ecological damage. I think what isn't understood as well is the profound impact the built environment has on the world's energy consumption.

Malaysia, like most countries, has already implemented moves to promote energy efficiency and renewable energy. In response to our nation's call to be more energy efficient, Colourcoil Industries has spent considerable time researching and developing with our paint supplier, special paint coatings for our colour coil coating process, that is solar reflective. This means downstream metal roofing manufacturers using our special pre-painted steel/aluminum, will be able to produce "cool" metal roofs that will reflect the heat of the sun thus reducing the building's cooling load and associated air conditioning costs.

In order to advance the goal of making the built environment more energy efficient and sustainable, Colourcoil Industries, an ENERGY STAR partner, is now promoting the usage of environmentally responsible, high performance "solar-reflective" pre-painted steel for metal roofing systems.

Our flagship products, COLOURCOIL PVF2, Metallic PVF2 and Duotone PVF2 Series are formulated with full strength genuine 70% PVF2 KYNAR 500 Fluorocarbon (PVDF) binder that contains 100% ceramic or inorganic CIGP solar reflective pigments. The colours in these series are energy-efficient compliant to Energy Star and GBI (Green Building Index) standards for the downstream manufacturing of cool metal roofs. Not only this, our high performance products also come with 20-year warranty against colour fading, chalking and peeling with 25-year warranty against corrosion.

Our energy efficient metal roofs comply with green rating standards and are also environmentally-friendly. Made of recycled content, the paint coatings are lead-free and mercury-free, which make it safe and suitable for rainwater harvesting.

In order to create awareness and also to promote the use of energy efficient materials and practices in the construction of public and even private buildings, Colourcoil Industries has been actively organising seminars and talks for professional building consultants and designers. We reach out to the end users by being actively involved in public events organised by the professional bodies and government departments. To keep ourselves abreast with the trends in the industry and as a testament of our commitment towards sustainable development, we are a member of the United State's CRRC and Malaysia's MGBC.

How popular are you in Asia Pacific? What are the recent projects?

Although we produce quite a number of pre-painted steel products the one that we really specialised in is high quality 70% PVDF coatings. We also provide an option for substrate selection of aluminum-zinc or GI coated steel for applications requiring higher protection against corrosion. This is definitely our advantage over others as not many coil coating lines can accommodate these types of customisation, especially in smaller quantities.

Our clients who come to us seeking these services normally require it for applications in heavy industrial building and buildings exposed to extreme environmental conditions. We are also popular with clients who require customised colours to suit their requirement. The fact that our infrared-cured finishes are smoother as well as our offer

of up to 20 years warranty on colour fading, chalking and peeling and up to 25 years for corrosion on our PVF2 Series further boosts our preference as brand of choice among our valued professional consultants in the building construction sector.

Within the last 10 years of our existence, we have been able to expand our client base not just in Malaysia but in Brunei, Indonesia, Singapore, Vietnam, Egypt and Mauritius.

Some of our recent major projects include the 1Borneo Hypermall, Petronas Methanol Plant, The Gardens at Mid Valley Mega Mall, Shah Alam Royal Theatre, Nusajaya Government Complex and Sentosa Cove residences.

How do you see the markets for the energy efficient metal roofing?

Awareness of the benefits of green building is rising significantly with the help of educational courses and trainings organised by green building councils and similar organisations. Already, market stakeholders in Australia, Singapore and Hong Kong are more educated about the merits of green buildings. In the case of Malaysia we are catching up. There is certainly more awareness about the long-term benefits of building greener buildings after the launching of Malaysia's GBI (Green Building Index) last year.

Now, with greater awareness and continued support from the government and green building councils, there will no doubt be a growing market for solar-reflective, energy efficient metal roofs. Retrofitting or renovation of existing buildings will also help boost the market for green metal roofs. Someone once said, "The cheapest, most reliable source of new energy is the saved energy". In the interest of helping to reduce global warming as well as to reduce current energy consumption crisis, we certainly hope our Governments to look into the possibility of providing incentives to consumers who use or rather install certified green products such as a "cool metal roof".

In the U.S, the Energy Policy Act of 2005 (EPAct) provides incentives in the form of "tax credit" for certified cool metal roofing. Specifically, the EPAct offers homeowners, tax incentives for making energy efficiency improvements. For this green bandwagon to roll faster, developers will need to exchange knowledge, materials and resources, as well as upgrade their expertise, skills and practices related to green building development and management. Governments and green building associations should also closely collaborate and offer more incentives to builders and consumers of green building products.

How do you meet the demands of 'Urban Heat Islands' in Malaysia?

As most of us know, Urban Heat Island (UHI) effect is a modern-day affliction attributed to rapid development and scant supply of trees. Concrete jungles trap solar energy in the day and release heat at night so UHIs are hot night and day. Man-made surfaces like asphalt, bricks and concrete have low reflectivity thus absorbing heat. These factors lead to soaring temperatures of up to 40 °C. Hotter air increases the frequency and intensity of ground-level ozone, affecting air quality. Heat waves cause heat exhaustion and heat stroke while climbing temperatures lead to increased energy usage, contributing to global warming. Hence, UHIs affect air quality, public health and energy usage. It has been reported that Putrajaya is 5°C hotter than other cities in Malaysia. As a new Urban Heat Island (UHI), Putrajaya has joined the ranks of Kuala Lumpur, Penang, Johor Baru and Singapore as well.

There are basically four main strategies to reduce urban heat: 1) increasing tree and vegetative cover, 2) using cool pavements, 3) installing green roofs (also called "rooftop gardens" or "eco-roofs"), and 4) installing cool solar reflective roofs.

Installing a cool metal roof, means having to install a metal roof which is manufactured using special colour coated steel or aluminum material that is solar reflective. Colourcoil's KOOL



PETER WONG
Commercial Manager, Colourcoil.

COLOURCOIL INDUSTRIES is a well established Malaysian owned company specializing in the manufacturing of pre-painted steel coils (i.e. color coated steel coils). The company uses state-of-the-art infra-red coil coating technology to produce high quality pre-painted metal products, catering to the wide applications in the building and construction industry. Colourcoil's high performance pre-painted steel coils are known for their amazing smooth finishes with outstanding colour retention and durability properties.

pre-painted steel products are now solar-reflective. Downstream metal roofing manufacturers working with us are now be able to offer their clients the option of going green by installing a cool metal roof.

With the exciting colours available in our colour charts that comply to ENERGY STAR and Green Building Index (GBI) requirements, clients can choose a colour best suits their requirement thus contributing to a cooler environment. I would like to mention that beyond urban heat island mitigation, cool metal roofs provide a number of benefits which includes:

- Reduced energy use: A cool roof transfers less heat to the building below, so the building stays cooler and uses less energy for air conditioning.
- Reduced air pollution and greenhouse gas emissions: By lowering energy use, cool roofs decrease the production of associated air pollution and greenhouse gas emissions.
- Improved human health and comfort: Cool roofs can reduce air temperatures inside buildings with and without air conditioning, helping to prevent heat-related illnesses and deaths.

Can you tell us about your Environment, Health & Safety (EHS) commitment?

At Colourcoil Industries, we have a G.R.E.E.N. environment, health and safety commitment. Firstly, we guard against adverse EHS risks and strive for continuous improvements in our production practices and performance; R is to practice the 3R concept of reduce, re-use and recycle of any raw materials or resources in our daily operations.

The 1st E is for enhancing efficiency in the usage of our overall resources and energy. Solar-heating for example has been incorporated in our manufacturing process as part of our continuous efforts of not only incorporating energy-efficiency characteristics in our products, but in our operations as well. Ideally there should be no- or minimum waste, that goes un-used or not recycled. As our business grows and periodic reviews are made, we take action on any need to improve our operations and opt for cleaner processes in our coating line so as to reduce any wastage. For example, currently we are in the midst of reviewing and improving to a better water & gas waste management system, which can best accommodate to our production level.

The 2nd E is ensuring compliance with legal and other requirements. This has led to our operations being in compliance with regulations and legal requirements with regards to environment policies and bylaws. The last N in GREEN stands for Nurturing and promoting EHS awareness among our employees, suppliers and contractors. All staff and personnel are provided up-to-date OSHA trainings and we are delighted to note that Colourcoil Industries has zero records of any serious work haphazard-related injuries or accidents to date.

How does your quality control team work to produce cutting-edge products?

We have our own internal Quality Control Laboratory where our highly skilled technical staffs ensure that our products meet the international ASTM standards. Every single coil produced is thoroughly checked according to the stipulated standards to ensure the products manufactured live up to the performance stated. The infra-red curing technology that we incorporate in our coating-line is a significant factor in producing smooth surfaced, evenly coated and completely cured pre-painted steel.

We provide one of the longest warranties in the industry with a back-to-back warranty for not just colour performance, but for corrosion as well. There is no compromise on quality. We use only genuine 70% PVDF KYNAR 500 in all our flagship colour coated products, which has been proven beyond 35 years in the international building and construction industry by great testimonials on excellent colour retention. It is also our company's policy to only use paint coatings that are unleaded and mercury-free.

Being one of the most compact and highly technologically advanced coating lines in the world with an internal R&D team comprising of people from various industries, we are able to experiment with many new ideas and are pretty efficient in coming up with exciting and innovative products for the clients. The very strong support and collaboration that we have from the various credible, international suppliers is fantastic.

One of the latest products which stemmed from our R&D team was the Duotone PVF2 Series, which features breathtaking unique colour-changing effects; definitely a wow factor to any project!



Shah Alam Royal Theatre.