

# Prepainted metal

Information letter of ECCA - Groupe français

May 2011



**Eco  
Construction**

E D I T O



**Ecology is paramount in construction. It is motivated by many objectives combining: economising, improving comfort, protecting the environment, using government subsidies and tax rebates, increasing the value of buildings ...**

For many years now, coil coated steel and aluminium manufacturing has been subject to an energy policy, which protects the environment, in their manufacturing process and the management of natural resources. Although it is an ongoing challenge to reduce their carbon footprint, they have become environmentally friendly materials for the duration of their lifespan. A second step has now been taken with constructive, economical solutions which in some cases even produce energy. Cooperation between designers, project managers and industrial manufacturers is essential to create good looking eco-constructions: The skill of one, combined with the talent of others. The co-engineering between industrial manufacturers is proof of innovation and unexpected opportunities. It, more often than not, generates savings and this time "financial". Coil coating is, without a doubt, the material point of reference in the construction industry. This is why it is essential to carry on implementing eco-responsible solutions. Two sorts of technology with a promising future: reflective paints and photovoltaic roofs.

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President of the ECCA Groupe Français



Credit Fotolia

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# Eco-construction

**Number 1** in energy consumption, buildings are a major contender for the reduction of greenhouse gases.

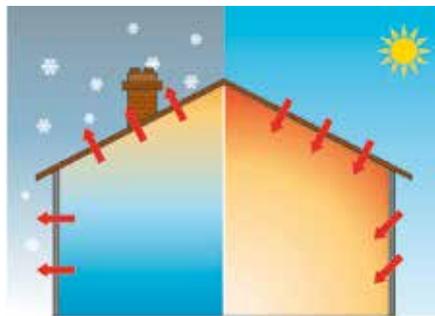
Significant progress has been made over recent years offering designers and project managers longer lasting solutions with improved thermal performance.

Coil coated steel and aluminium, used for cladding or roofing, Coil coated steel and aluminium, used for roofing or cladding offers superior performance compared to other construction solutions.

## Reflective paints\*

Coil coated reflective paint, used for roofs or cladding reflect the infra red rays of the sun on dark colours, reduces heating or air conditioning costs and improves thermal comfort. Through its specific pigmentation this technology provides a cost effective solution to the thermal energy transfer problem associated with metallic structures.

### Reflective paint properties



Without reflective paint



with reflective paint

Credit Becker Industrie

## A thermal regulation coating

Reflective paint coil coating combines technical performance and is aesthetically pleasing:

### Temperature drop

Today, dark shades are the most popular, but they also absorb most of the energy from the solar spectrum. By using reflective paint heat is reduced on cladding and therefore indoor temperatures are reduced by 5°C to 10°C\*, thus improving comfort during the summer months.

\*in the case of non-insulated dry cover

### Durability of materials

By reducing the surface temperature of buildings, reflective paint reduces thermal shocks and tension on metal and increases its durability. Not only will the use of coil coated steel sheets or aluminium be more economical, it will also contribute to meeting new European legislation regarding energy, potentially enabling customers to claim tax rebates or government subsidies.

### Reducing energy consumption

By improving reflection of the energy from the solar spectrum, reflective paint reduces air-conditioning consumption and decreases carbon dioxide emissions.

\* Source BeckryTherm from Becker Industrie.



Credit : BASF Coatings



Credit Becker Industrie

## Photovoltaic roofs

Coil coated steel or aluminium roofs equipped with photovoltaic panels provide designers, builders and installers with innovative solutions for positive energy homes. These solutions improve the security of the installations, increase the lifespan of the materials and optimise investment yield.



By using solar energy, can you produce electricity for your own use or re sale? It is possible. More and more home owners and apartment blocks are interested in the idea for both ecological and financial reasons.

## Coil coated aluminium or steel roofs offer a very efficient solution :



### Integration

Coil coated metal is the best adapted construction solution for a roof incorporating a photovoltaic system. No other solution offers perfect integration of the system within a traditional roof.

### Installation systems

Directly built into the roof for an aesthetic appearance, or integrated into an existing roof, coil coating adapts to any construction.

### Low pitch roofs

By using the coil coated metal system very low pitch roofs can be built (up to 7% pitch) This low pitch enables: better exposure to UV rays thus optimising energy yield and adaptability to the most audacious styles of architecture, for example renovation projects.

### The coating

The quality of the coil coating increases the lifespan of the photovoltaic systems. This durability is a major advantage for project managers offering a solution to the problem of how is it possible to guarantee the investment over 15 or 20 years without adapting the longevity of the installation?

Credit : Arcelor Mittal

### AluPlusSolar



Kalzzip AluPlusSolar is a solar solution which optimises the conception of the roof and energy production. Supple modules (amorphous), highly resistant, glued to the Kalzzip metal roofing; arched or straight, concave or convex.

For more information [www.kalzzip.com](http://www.kalzzip.com)

### Colorcoat Solar



Credit : Becker Industries

Colorcoat SDP 35 Solar is designed for thermal control for the building envelope. The optimal reflective qualities of this coil coated steel improve the thermal comfort inside the building and reduce air-conditioning related energy bills. Colorcoat SDP 35 Solar is available in a wide range of shades.

For more information [www.myriad.fr](http://www.myriad.fr)

### Ekinoxe



Ekinoxe is an innovative «factory integrated» solution which combines efficiency and guarantees, whilst respecting the new environmental standards. With double or triple skin, Ekinoxe enables you to create roofs with perfect thermal insulation in accordance with French Thermal Regulation legislation relative to the environment: Règlementation Thermique and Grenelle de l'Environnement. For more information [www.arcelormittal.com.fr](http://www.arcelormittal.com.fr)

## Building a low-energy or positive energy house?

Today, the highest demand is for dark colours and the shades that absorb as much of the energy from the solar spectrum as possible. By using a reflective paint, heat on cladding is reduced, thereby reducing indoor temperatures by 5° to 10°C\* and comfort in the summer months is increased. \*In the case of a non-insulated dry cover.

## Looking for the latest innovations?

Discover all the coil coating innovations: anti-condensation coatings, insulating panels, soundproofing solutions, reflective paints...

## Looking to save money ?

By choosing a coil coated metal roof you will make substantial savings on your housing costs; savings in transport and insulation costs, energy, and the cost of the building structure: Find out all you need to know about the cost versus benefits ratio for your buildings.

## Protecting the environment ?

Metal is an environmentally friendly material throughout its lifespan. Reduced inconvenience and pollution on construction sites. Metal constructions fall into the 'dry building' category: no water, no mud, no dust. A High Environmental Quality status point.

## Exemplary constructions

A slide show is available showing many different architectural ideas using coil coated metals: low pitch roofs, a wide range of shades...

Find out more about our innovative roofs:

[www.toiture-innovante.fr](http://www.toiture-innovante.fr)

### For more information

> Contact ECCA members:

AKZO NOBEL - ALCOA - ARCELORMITTAL - ARKEMA  
BECKERS - CHEMETALL - HENKEL - MIRALU - MYRIAD -  
NOVACEL - PPG Industrials Coatings - SAMI - SORRAL Dufenco  
Coating - VALSPAR

> Or contact the ECCA



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The website [www.toiture-innovante.fr](http://www.toiture-innovante.fr) is designed for architects and project managers who are looking for new solutions to cover houses and homes.



Designed by the main players in the coil coating field the site offers designers new and ingenious solutions to embellish, insulate, economise, protect the environment and complete the construction faster – both for new builds and renovation projects.

## ecca News



Three and a half years after buying the Anglo-Dutch company Corus, on 27<sup>th</sup> September Corus became Tata Steel Europe. Tata Steel bought Corus in April 2007 and this transaction created one of the biggest steel producers in the world. Myriad has designed a new logo accordingly.



Arkema has successfully launched, right on time, a new polymer fluoride production unit. PVDF Kynar® on their Changshu site in China. This extra capacity means that ARKEMA now has major production means for VF2 and PVDF over three continents - Europe, North America and Asia thus better serving our regional customers.



On 3<sup>rd</sup> May Beckers Industrial Coatings, European leader in the supply of liquid industrial paint, created their new South EMEA region (Europe Middle East Africa). This alliance is a fusion of the Coil Coating and Special Coatings division of the Italian and French companies (Beckers Industrial Coatings Italia) and (Becker Industrie). The aim of this is to work together as much as possible in order to optimise customer relations.



ArcelorMittal construction is launching SINEA, their new organic coating. This thick, very high performance thermosetting system means that they can now offer long term guarantees.