

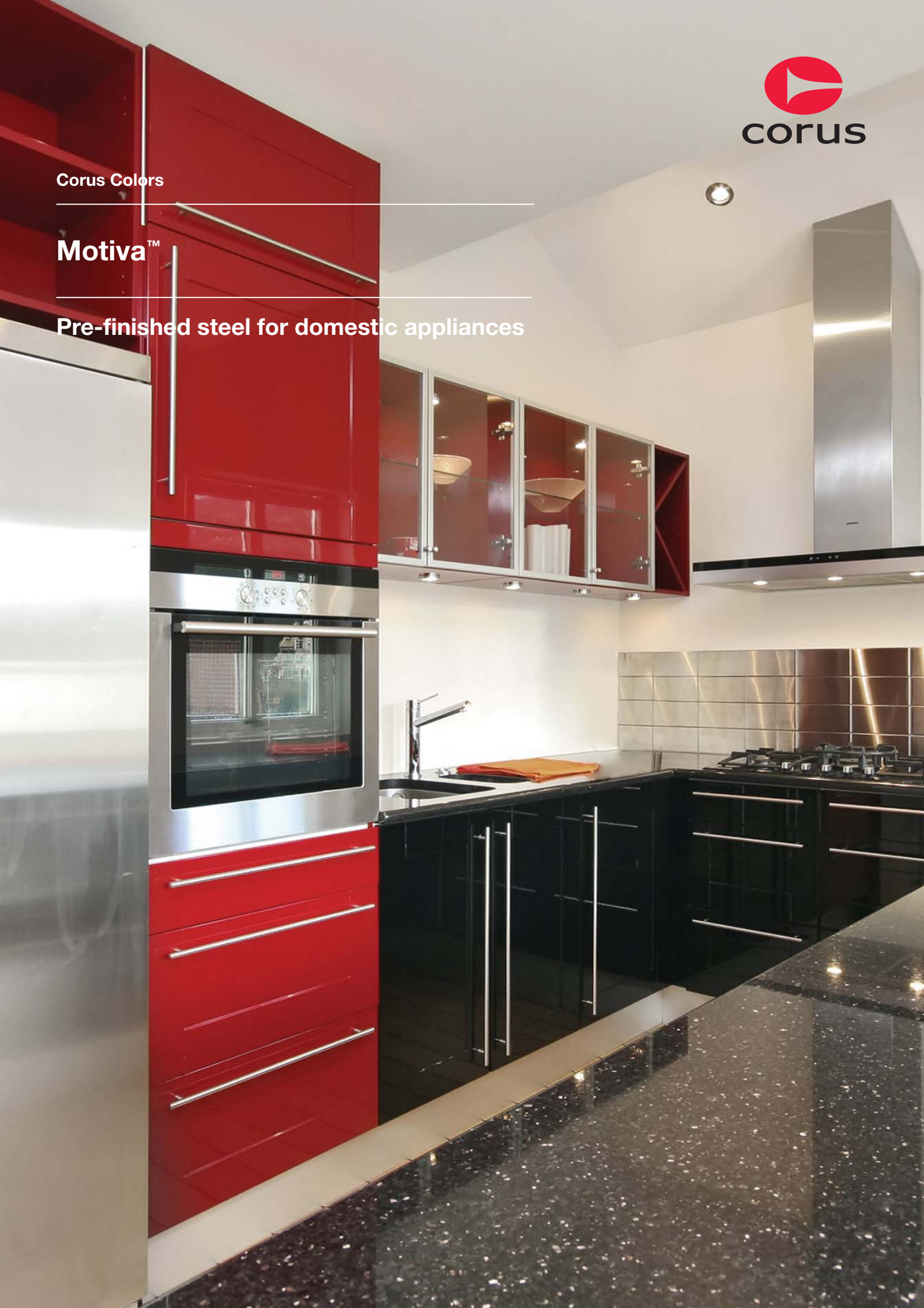


**CORUS**

Corus Colors

**Motiva™**

Pre-finished steel for domestic appliances





Paul Jones

orup

# Working together

**Corus is an international company providing steel products and services to customers worldwide. We stand for 'Value in steel' and through our technical excellence and understanding of our markets, we help our customers achieve results.**

## Corus overview

Corus manufactures pre-finished steel for many sectors, with one of the main markets being domestic appliances. With the Motiva™ range of pre-finished steel for domestic appliances, we have a proven track record, supported by a range of services, expert advice and guidance.

Corus has over 30 years of experience in producing pre-finished steel for domestic appliances. We can help you right from the start, developing unique solutions for your individual needs. And if you haven't used pre-finished metals before, our expert team can advise you ensuring a smooth transition.

## Motiva™ from Corus

Motiva™ from Corus is a range of pre-finished steel products specifically developed for the domestic appliance market and widely used for the following applications: wrap-arounds, tops, doors and side panels for washing machines, refrigerators, dishwashers, tumble driers, freezers and microwave ovens. In addition, our recent innovation in non-stick technology means that we can now offer a product for oven interiors.

To help you with your specification we have categorised the Motiva™ range of products into the following, colour coded end application groups:



**Motiva™ Hot** – Ovens, microwave ovens, splash backs and hoods

Image courtesy of Sharp Electronics



**Motiva™ Wet** – Washing machines, dish washers, tumble driers

Image courtesy of Indesit



**Motiva™ Cold** – Refrigerators, upright and chest freezers

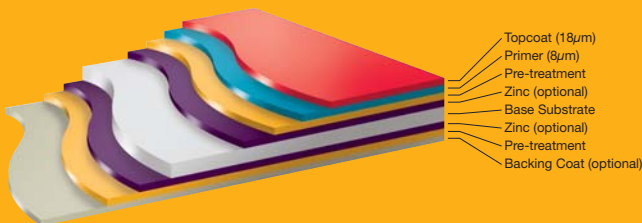
Image courtesy of Electrolux

# Pre-finished steel

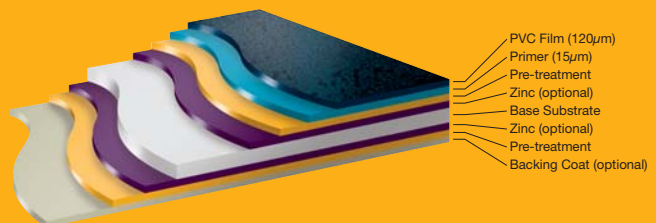
Pre-finished steel offers design flexibility and value in use, combining the strength and longevity of our substrates with the aesthetics and functionality of the coating.

Pre-finished steel can be pressed, roll formed, drawn or notched without affecting the performance or finish of the product.

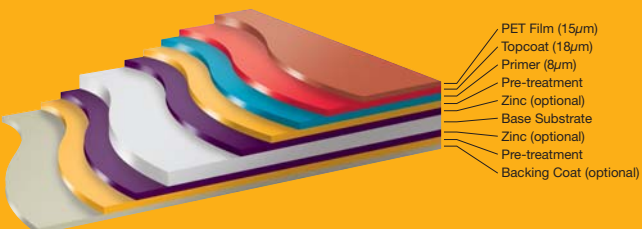
Pre-finished steel is a steel strip product with a number of paint layers and treatments applied in a highly automated and carefully controlled environment. There are three generic pre-finished product types: paint, co-laminate & laminate.



Paint



Laminate



Co-laminate



Image courtesy of Electrolux

## Benefits of pre-finished steel

Pre-finished steel can provide a number of benefits over post-painted steel including:

### Manufacturing & technological benefits

- Reduced manufacturing cycle time (pre-finished steel reduces the number of steps involved with incoming material to finished product).
- Less work in progress reducing the amount of stock held on the floor.
- Minimised rework costs as onus is on Corus as your material supplier.
- Less handling between processes and therefore less damage.
- Excellent opportunity for productivity improvements due to time and resource saved from post painting.
- Reduction of colour change time.
- Guaranteed supply chain.

### Environmental benefits

- Eliminates need to store hazardous chemicals.
- Motiva™ pre-finished steel range from Corus is RoHS compliant for domestic appliances.
- Pre-finished steel from Corus is 100% recyclable and can be recycled over and over again without any reduction in properties or performance.

### Product and design advantages

- Coatings developed for specific applications.
- Range of gloss finishes available.
- Wide variety of finishes and effects.
- Uniform paint thickness and surface finish.
- Batch to batch coil consistency.



Image courtesy of Sharp Electronics



Image courtesy of Indesit



# Motiva™ product selector

**We recognise the critical importance of both the surface finish and performance in domestic appliances and so our Motiva™ products are customised for aesthetic appeal, stain and mar resistance and durability.**

The Motiva™ range from Corus has products to suit all gloss, tactility and texture preferences and we work together with you to tailor the product to exacting specifications. There are even products that mimic post paint to allow for 'mix & match' with powder coated panels. Selection of the topcoat depends upon the properties and surface finish you require. Consult our team for recommendations and expert advice.

## Motiva™ coating properties

Paint	a two-coat polyester paint system designed to meet customer requirements.
Co-laminate	a three-coat system of paint and PET Film. Available in an extensive range of colours and patterns and provides a high gloss finish with excellent stain and scratch resistance.
Laminate	using a PVC film allowing a wealth of patterns, textures and colours. It has good scratch resistance, excellent durability and colour consistency.

### Motiva™ typical properties

Please refer to the Motiva™ pre-finished steel product selector for a suitable product. We are constantly updating our product portfolio to meet the requirements of domestic appliances so do not hesitate to contact us for more information.		Motiva™ Cold	Motiva™ Wet	Motiva™ Hot
	Thickness (min)	25 µm	25 µm	25 µm
	Gloss (60°)	20 – 85	20 – 85	20 – 85
	Surface appearances available	Smooth, Textured, Orange Peel	Smooth, Textured, Orange Peel	Smooth, Textured
	Pencil Hardness	From F - 2H	From F – 2H	From F - 2H
	Flexibility	0.5 T	0.5 T	0.5 T
	Adhesion			
	Taping after T bend	No pick off	No pick off	No pick off
	Cross Hatch	100%	100%	100%
	Corrosion Resistance	CR      HDG	CR      HDG	CR      HDG
	Salt Spray	500 hrs    500 hrs	500 hrs    500 hrs	500 hrs    500 hrs
	Humidity	500 hrs    1000 hrs	500 hrs    1000 hrs	500 hrs    1000 hrs
	Abrasion Resistance (Taber)	25 mg	25 mg	25 mg
Stain Resistance	Excellent	Excellent	Excellent	
Special Properties	Graffiti, No insulating foam adherence on top.	Good resistance to domestic detergents.	Good resistance to high temperatures.	

#### Table notes

The figures contained in the table are typical properties and do not constitute a specification. Please refer to the Motiva™ product selector, the category datasheets or contact us for more information.

#### Substrates

Corus provide a range of cold reduced, hot dip galvanised and stainless steel grades for domestic appliances. Consult Corus for advice on specific applications or refer to the specific category factsheets.

Substrate	Standard	Corrosion Resistance	Dimensional Limits					
			CR DA310	CR DC05	Galvatite® DX51	Galvatite® DX53/4		
Cold Reduced	BS EN 10 130:2006	Low – Med*						
Galvatite®	BS EN 10 327:2004	High						
Stainless and imitation stainless steel	Please contact us for more information							
			Thickness (mm)	Width (mm)				
			≥	≤				
			0.4	0.499	1300	Refer to Corus	1300	N/A
			0.5	0.599	1420	Refer to Corus	1420	N/A
			0.6	1.200	1420	1420	1420	1420

\* Resistance level depends on the organic coating system used.

NB: Please consult Corus about dimensions marginally outside those shown in the table.



# Performance

The Motiva™ product range is available in a wide range of colours, with solid or metallic effects as well as bespoke finishes tailored to individual needs.

## Performance and durability

The Motiva™ range of products from Corus are designed to meet the technical requirements of end applications in terms of flexibility, stain and corrosion resistance, surface hardness, resistance to detergents and scratches.

Our products are suitable for indirect contact with food and are stable to internal levels of light.

## Corrosion performance

Modern primers have enhanced corrosion inhibitors incorporating the latest chrome-free technology ensuring they are RoHS compliant.

As a result of our advancing technology on modern primers, the use of CR has been facilitated on applications previously only achievable on HDG. For more information please contact us.

## Forming and processing

Pre-finished steel can be formed and processed using the same techniques as post painted materials with no change to the appearance. Techniques include: cutting, shearing, notching, piercing, slitting, press braking, folding, roll forming, spinning and deep drawing. For information on these techniques please refer to our Design Solutions manual or contact us.

## Cut edges

The high technology coating layers prevent corrosion spread under the coating. In salt spray and humidity testing no more than 2 mm of creep will occur in the time stated in the performance statement for that coating. Our designers manual (Design Solutions) provides advice on how to ensure cut edges are not exposed or in view.

## Safety and testing

All products are tested to relevant ECCA standards. Health and Safety datasheets are available, contact us for more information.



Image courtesy of Electrolux





### Cleaning and maintenance

The following general guidelines apply for pre-finished steel but for more information on specific products please contact us:

- All our pre-finished steel products can be cleaned with commercially available, water based cleaning products.
- The use of abrasive cleaners or scouring pads are not recommended.
- It is recommended that an alcohol based cleaner is used periodically on Motiva™ G.
- All our pre-finished steel products have good resistance to heat, detergents and other household substances such as foodstuffs, shoe polish and lipstick, which can stain ordinary paint finishes.

### Environmental

Pre-finished steel has long been recognised as a sustainable approach to painted metal applications. With over 30 years of experience in this process, Corus is best able to take advantage of the minimised wastage and emissions associated with the quality-controlled process used in the manufacture of pre-finished steel.

We hold ISO14001 certification. However, we actively develop our products and processes to reduce their environmental impact to a level beyond just compliance.

As steel is 100% recyclable it means that at the end-of-life it can be recycled back into new steel products without any compromise in quality. Corus can help customers in their eco-design efforts to comply with the EuP directive. For example, a life cycle analysis could be undertaken for different stages of a component's life cycle and identify areas for reducing the product's environmental impact.



# Service

**Corus has over 30 years of experience in producing pre-finished steel, as well as over 30 years of design and prototyping expertise and so are able to offer unparalleled service and support.**

## **Corus Prototyping Centre**

Our prototyping facilities offer a free and confidential service and have been used to assist companies in converting their processes from post paint to using pre-finished metals. The advice includes many aspects of design including design of corners, dealing with cut edges and joining techniques. For more information contact us or refer to our Design Solutions manual.

## **Research and Development support**

We can draw on the world-class resources of Corus Research Development and Technology, who offer practical testing and evaluation facilities and expertise in key areas including finite element analysis, fabrication, corrosion, welding, adhesives and mechanical fixings.

## **Further processing**

We have a network of distributors that offer comprehensive service packages – from slit coil and cut to length blanks, to part finished components with just in time delivery. We can work with you to tailor a service package that reflects your needs.

## **Technical expertise and knowledge**

With more than 30 years of experience, our aim is to make working with pre-finished steel as easy as possible. We can offer free, confidential advice for designing and manufacturing with pre-finished steel. Our services include CAD design, prototyping and design related advice.

## **Sample warehouse**

Trial material is offered through the sample warehouse from Corus, which has a wide variety of pre-finished steel sheets suitable for prototyping, forming trials and material testing.

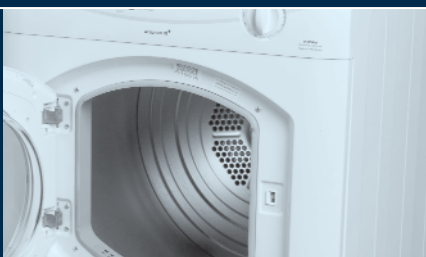
## **Customer services and local representatives**

Our aim is to be the supplier of choice for all our customers and we are committed to providing excellent customer service to achieve this.

We have local representatives in 43 countries and offer sales and distribution routes on a global basis, all arranged through your local business development manager. Contact us for further information.

## **Internet services**

The Corus Consumer Products website offers a wealth of services to users from downloadable case studies and datasheets to 3D visualisations and an online product selector. Visit us at [www.corusconsumerproducts.com](http://www.corusconsumerproducts.com)





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**www.corusconsumerproducts.com**

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