

# Ready-to-Paint

Brings superior qualities to the surface of cold rolled steel

Ready-to-Paint allows direct painting on cold rolled steel without any surface treatment such as degreasing, phosphating or passivating, while offering equivalent or even better results in terms of paint adherence and corrosion resistance, thus resulting in significant savings.

Moreover, the use of this product can be extended to the replacement of 2.5/2.5 micron electrogalvanised products when a high degree of corrosion protection before painting is not required.



## The process

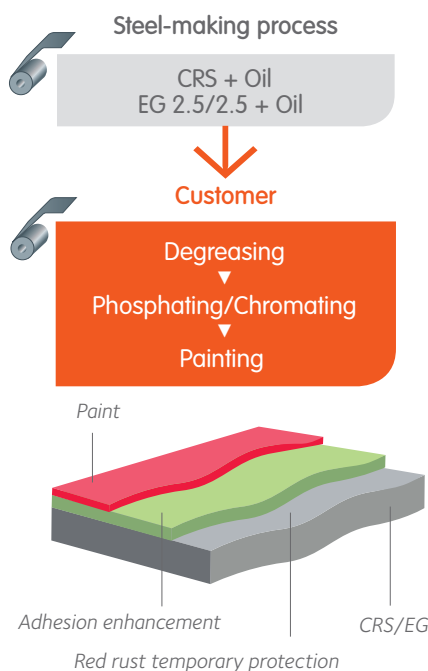
Ready-to-Paint is a coating that is continuously applied on both sides of cold rolled steel. Its role is to allow direct painting on the steel without any surface treatment: no need for degreasing, phosphating or passivating, for instance. The durability of painted parts is improved compared to Fe- or Zn-phosphating on both cold rolled steel and 2.5/2.5 micron electrogalvanised steel.

## The benefits in a nutshell

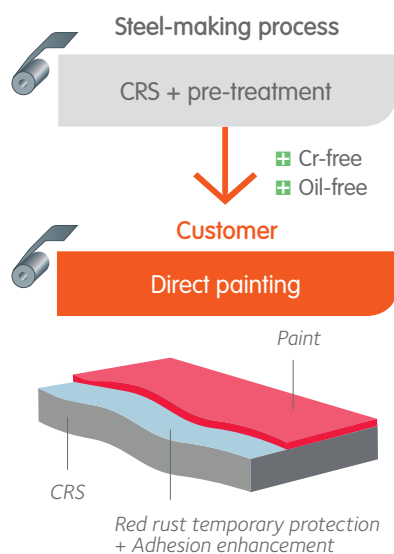
Ready-to-Paint has the following advantages for the customer:

- **Direct paintability** without degreasing, phosphating or any other surface treatment
- **Dry surface** of the product, leading to **improved safety conditions and cleanliness** at the customer's workshops
- **Temporary corrosion protection** during transportation, storage and manufacturing equivalent to slightly oiled cold rolled steel
- **Compatible with manufacturing and assembling methods** such as cutting, slitting, bending, profiling, light stamping, spot welding, seam welding and clinching
- **Compatible with customer painting methods:** powder, cataphoresis
- **No heavy metals** present in the coating

## Current painting process



## Proposed painting process



The use of this product results in substantial cost savings linked to:

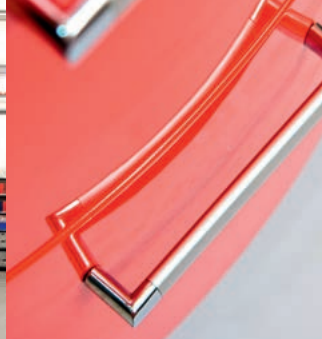
- The simplification of surface treatment:
  - Simplified process control
  - Lower wastewater treatment costs
- The substitution of 2.5/2.5 micron electrogalvanised product by Ready-to-Paint cold rolled steel

Another consequence of eliminating surface treatment is a **lower CO<sub>2</sub> footprint** and a positive impact on the environment.

## Main disadvantages:

- Oiling: wastewater production
- Phosphating: sludge production
- Economic, safety and ecological issues





### The applications

Ready-to-Paint is suitable for a wide range of applications such as heating/ventilation/air conditioning, metallic furniture, shelving systems, electrical cabinets, partitions, appliances (especially fridges), drums, lifts etc.

### The coating properties

Ready-to-Paint's surface treatment is silicone-free. Precautions to avoid further contamination of the surface by silicone are in place at our production line. Similar care needs to be ensured further down the supply chain.

Ready-to-Paint is food compliant and suitable for all types of food.

Ready-to-Paint's performance characteristics are summarised in the table below:

|                                      |  |
|--------------------------------------|--|
| Surface appearance                   | Dry, smooth, uniform and transparent   |
| Corrosion resistance before painting | 20 cycles without red rust appearance<br>Sheltered storage: no corrosion within six months if the packing, transportation, handling and storage conditions have been complied with   |
| Weldability range                    | $\Delta I > 1 \text{ kA}$  |
| Durability of painted parts          | Salt spray test – 240 hrs with scratch <sup>(1)</sup><br>Delamination on scratch < 2 mm<br>Ready-to-Paint performs similarly to Zn-phosphated EG 2.5/2.5 microns and better than Fe-phosphated cold rolled steel and Fe-phosphated EG 2.5/2.5 microns. |
|                                      | Salt spray test – 400 hrs without scratch <sup>(1)</sup><br>Rated 0 according to ISO 4628-3 (no red rust)  |
|                                      | Gitterschnitt test <sup>(2)</sup><br>Rated 0 – perfect adherence – no delamination   |
|                                      | Impact test<br>Rated 0 – perfect adherence – no delamination   |

<sup>(1)</sup> Neutral salt spray test carried out in accordance with ASTM B117-97 in an SKWT corrosion cabinet (indicative results based on tests with two different paints).

<sup>(2)</sup> Paint adhesion on a grid is evaluated in dry conditions, in wet conditions (after 500 hrs in humidity cabinet) and after recuperation (24 hrs drying after wet conditions). The rating indicates the degree of delamination.



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### The product range

Ready-to-Paint can be applied on:

- DC01
- DC03
- HC180CA
- HC220CA
- HC260CA
- Other grades possible on request

Thickness: 0.35 to 2 mm

Width: 700 to 1680 mm

### We are here to help you

ArcelorMittal has dedicated support engineers and research experts ready to help with all your questions. For the latest technical data or further information, please regularly consult our online product document centre at: [industry.arcelormittal.com](http://industry.arcelormittal.com)

### Any questions?

Ask them via our contact form on [industry.arcelormittal.com/getintouch](http://industry.arcelormittal.com/getintouch)

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