

Data sheet: C1.7

Availability and properties

Chromadek® for Domestic Appliances

Pre-painted hot-dip galvanised or electro-galvanised steel sheet

General description

CHROMADEK® for Domestic Appliances is available as Electro-galvanised substrate that has been coated with a high gloss coating with excellent decorative purposes for household appliances.

Steel substrate

CHROMADEK® for Domestic Appliances is available in Electro-galvanised steel substrate with a zinc coating mass of 36g/m² per side (ZE50/50).

Table 1. Available sizes for galvanised substrate

Nominal thickness <i>t</i> (mm)	Nominal width <i>w</i> (mm)
0.40	775
	1075
0.50	775
	875
	1075
	1225

Note:

Electro-galvanised sheet is produced to the same tolerances as for cold rolled sheet. Refer to Data Sheet: Cold Rolled Product Tolerances (file reference B1.1).

Forming

1. Roll-forming

Roll-forming rather than press braking is recommended for the forming of sections and components from pre-painted steel sheet, since there is less chance of damaging the paint coating. A multitude of sections can be roll-formed provided the necessary adjustments are made in roll clearances. Bend diameters should be larger than the bend to which the material was subjected during Quality Control Testing.

For further information, contact:

ArcelorMittal Steel South Africa Limited, PO Box 2, Vanderbijlpark 1900. Tel No (016)889 4081, Fax (016) 889-2022
e-mail address: chromadek@arcelormittal.com

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2. Press braking and folding

Pre-painted steel sheet can be press baked and folded on conventional machines however, the following practices should be adhered to:

2.1. Tools must be clean with no burrs or rough edges.

2.2 The die should be provided with adequate clearance at the bottom of the 'V', whilst the top of the 'V' should be polished to remove possible sharp edges.

The press should not be over-set and it should never 'bottom'.

The minimum inside bend diameter should always be in accordance with the bending properties of the substrate and flexibility of the paint system combined.

3. Lubricants

The organic coatings used for CHROMADEK® usually act as excellent dry film lubricants. Where lubricants are needed, the water-soluble types are recommended. However, if emulsified compounds are used, it is important to clean the surface as soon as possible after processing, otherwise staining of the paint coating may result.

4. Joining methods

Many joining techniques are now available as alternatives to the more traditional methods. Pre-painted materials cannot be welded by traditional methods as the coatings does not conduct electricity and can be damaged by heat. Consequently, if arc welded joints are necessary the welded area must be kept away from the visible areas of the coating.

5. Strippable films

A protective strippable film is available when required for applications where appearance is of prime importance, particularly household appliances. Storing of components protected by strippable films in either high temperature, high ultra-violet environments or for periods longer than 6 months, must be avoided, since the adhesives on the film may degrade and be transferred to the paint coating, making removal of the strippable film difficult.

Packaging, transportation and handling

CHROMADEK® is a decorative coating surface finish with good general abrasion resistance and should be handled with care to prevent damage to the coating. The backing coat is prone to scuffing damage (paint pick-off) and orders should specify the correct packaging in line with the mode of transport and the final destination. To avoid pressure marks coils should not be stacked, and should be dispatched 'eye-to-the-sky' (with vertical axes) to prevent the occurrence of surface defects during transport.

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Table 2. Paint system properties

Property	Test time/conditions	Method	Typical Values
T-bend test		ASTM D4145	0T. No adhesion loss
Film hardness		ASTM D3363	F
Scratch hardness		ISO 1518:1992	20N minimum
Gloss at 60°	At time of coating	ISO 2813:1994	70% ± 5%
Dry film thickness		ISO 2808:1997, Method 5B	22µm minimum – inclusive of primer
Resistance to corrosion: - Edge creep - Blister size	Salt spray (250 hours)	ISO 7253:1996 ASTM D1654 ISO 4628/2-1982	Less than 5mm 2-S2

Quality assurance

A quality assurance system that complies with SANS 9001 is in operation throughout the manufacturing process.

Supply conditions

CHROMADEK® for Domestic Appliances is supplied in terms of Price List 146 and ArcelorMittal South Africa's General Conditions of Sale.

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