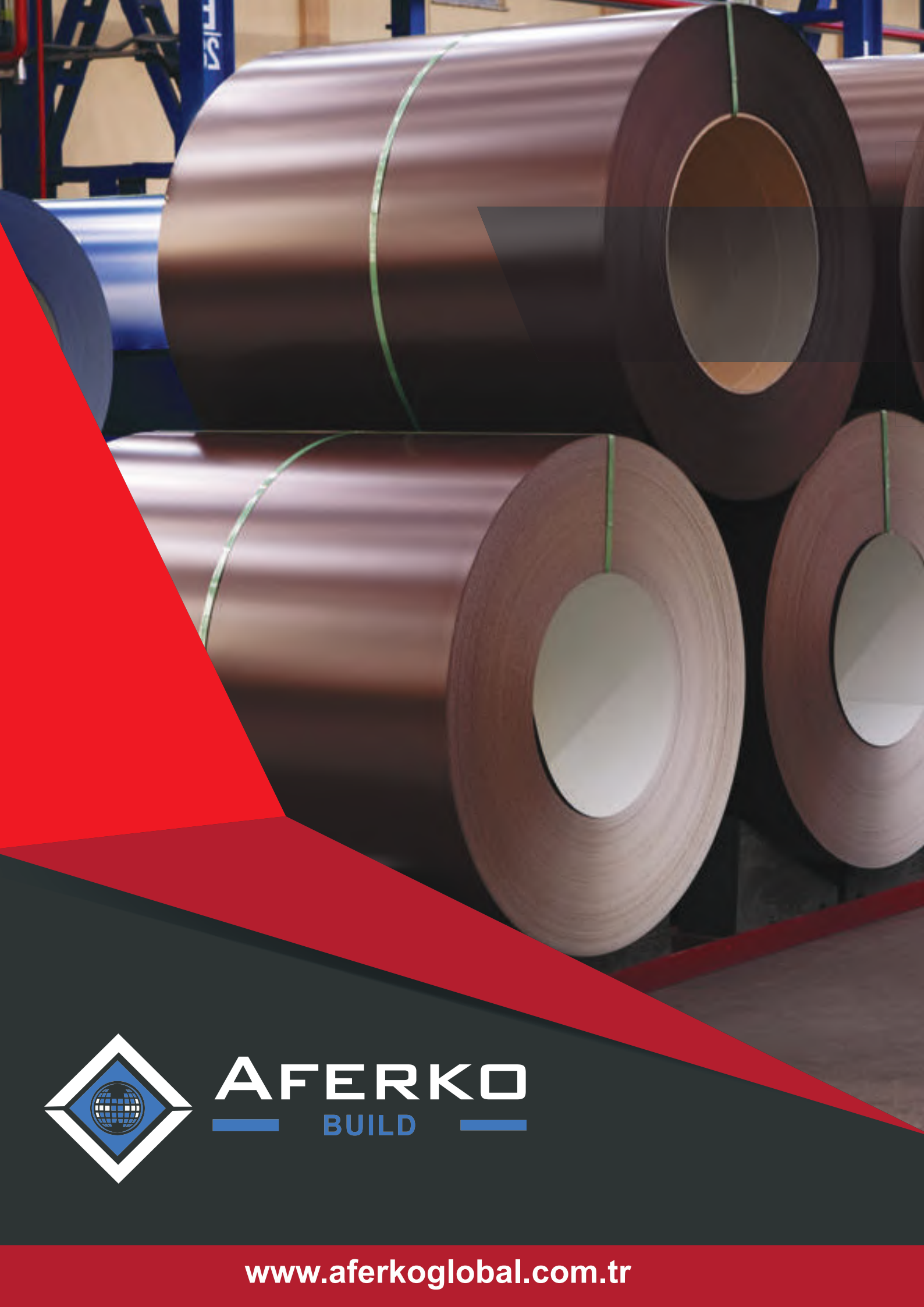
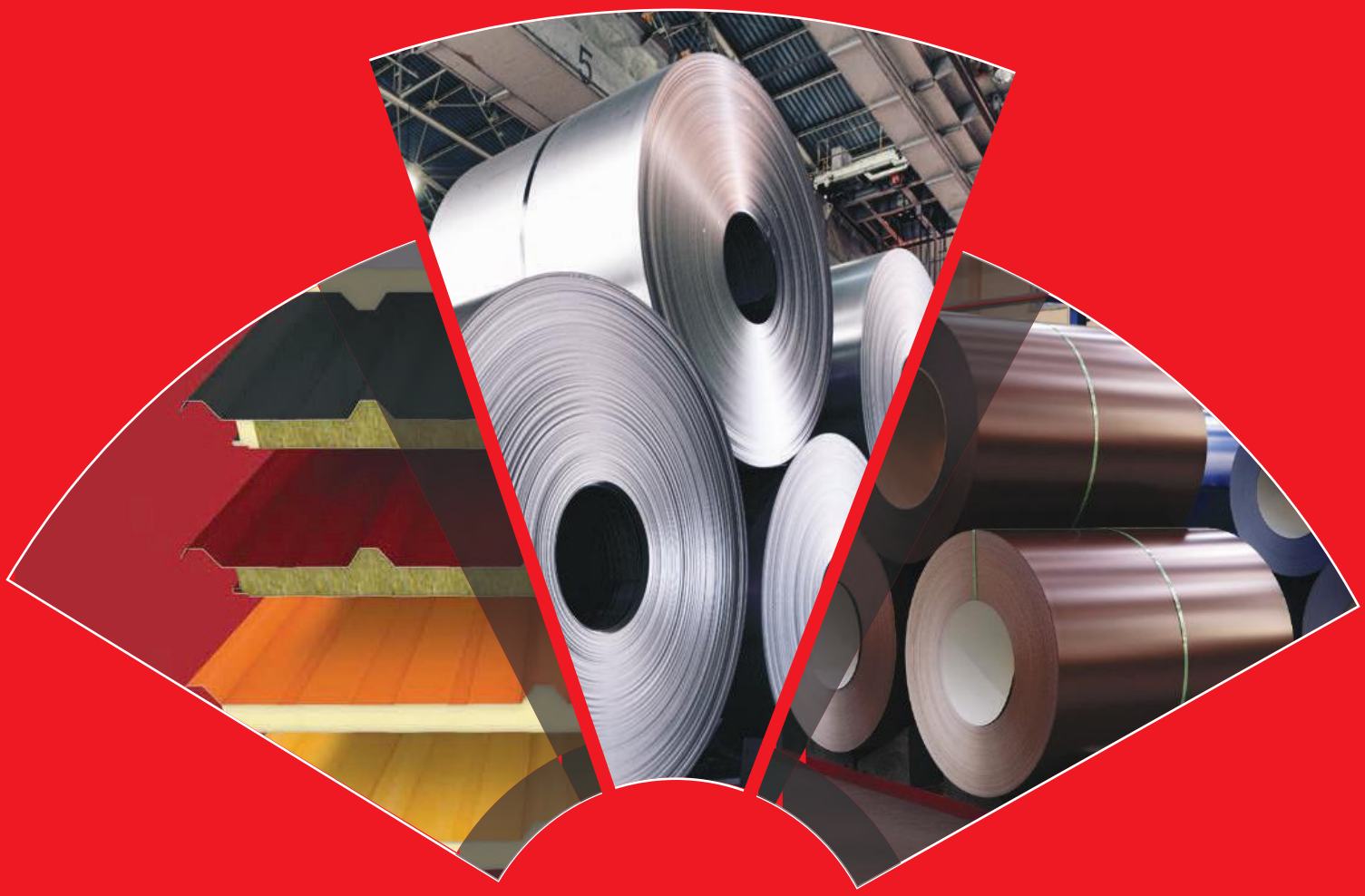


AFERKO
BUILD

www.aferkoglobal.com.tr



Solution Partner & **Supply Center**

Offering service to domestic and foreign metal market with experience of over 10 years, aims to become an essential solution partner of customers with a wide range of products, and quality and quick services.

is a trading company specialized in coated flat steel products such as galvanized, prepainted steel, and aluminium .Starmet yapı contributes to the cooperative customer activities with minimum stock cost.

and far east mills From our Service center, we can offer corrugated sheets, trapezoidal sheets, strips,flat sheets ,coils, sandwhich panels ,composite panels with prompt shipment.

We are handling only flat coated steel products for many years and these product is our expertize.We share our experience, international operation strength and purchasing power with you. We are responsible for the whole process from the production point upto your final product.

We also help you to choose the correct product for your production process. We recommend you the right time and place of purchase by assesing conditions in the international market. We provide you the advantages of our strong financial solutions for your purchases.

advantages of these qualifications, we at the same time increase total quality and proficiency.

serves you by sharing its foreign trade experience and capabilities as well as knowledge and experience in procurement and product selection.

Quality means
doing it right
when no one is looking.

Henry Ford

HDG - HOT DIP GALVANIZED

Having passed Hot Strip Mill and Continuous Pickling Line, after rolling on Cold Reversing Mill (CRM), full hard products with surface quality and thickness (0.25-2.00 mm) suitable for further processing on HDGL are produced. Zinc coating is applied by continuous annealing followed by immerging of the strip into zinc pot on Hot Dip Galvanizing Line (HDGL) To protect the surface of galvanized products from corrosion, chemical passivation and protective oil may be applied. Products with thickness ranging between 0.25-3.00 mm and width ranging between 800-1530 mm may be produced on Hot Dip Galvanizing Line

Thickness (mm)	Steel Grades	
	DX51D, DX52D, DX53D, S220GD*, S250GD*, S280GD*	S220GD, S250GD, S280GD, S320GD, S350GD
	Max. Width (mm)	
0,25 - 0,31	1050	
0,32 - 0,36	1250	
0,37 - 0,40	1200	
0,41 - 0,45	1300	
0,46 – 3,00	1500	
1,00		1250

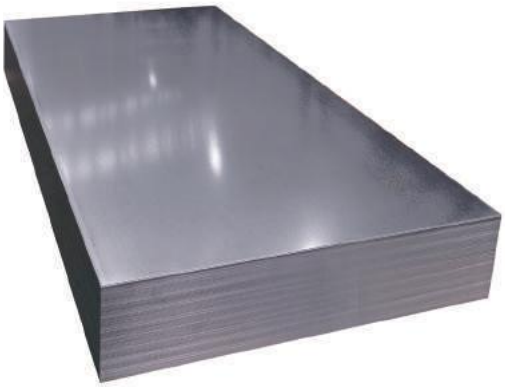
* Depending on the grade of hot rolled incoming materials, these steel grades' group may change. Sizes which may be produced should be determined by way of negotiations.

HDG - HOT DIP GALVANIZED

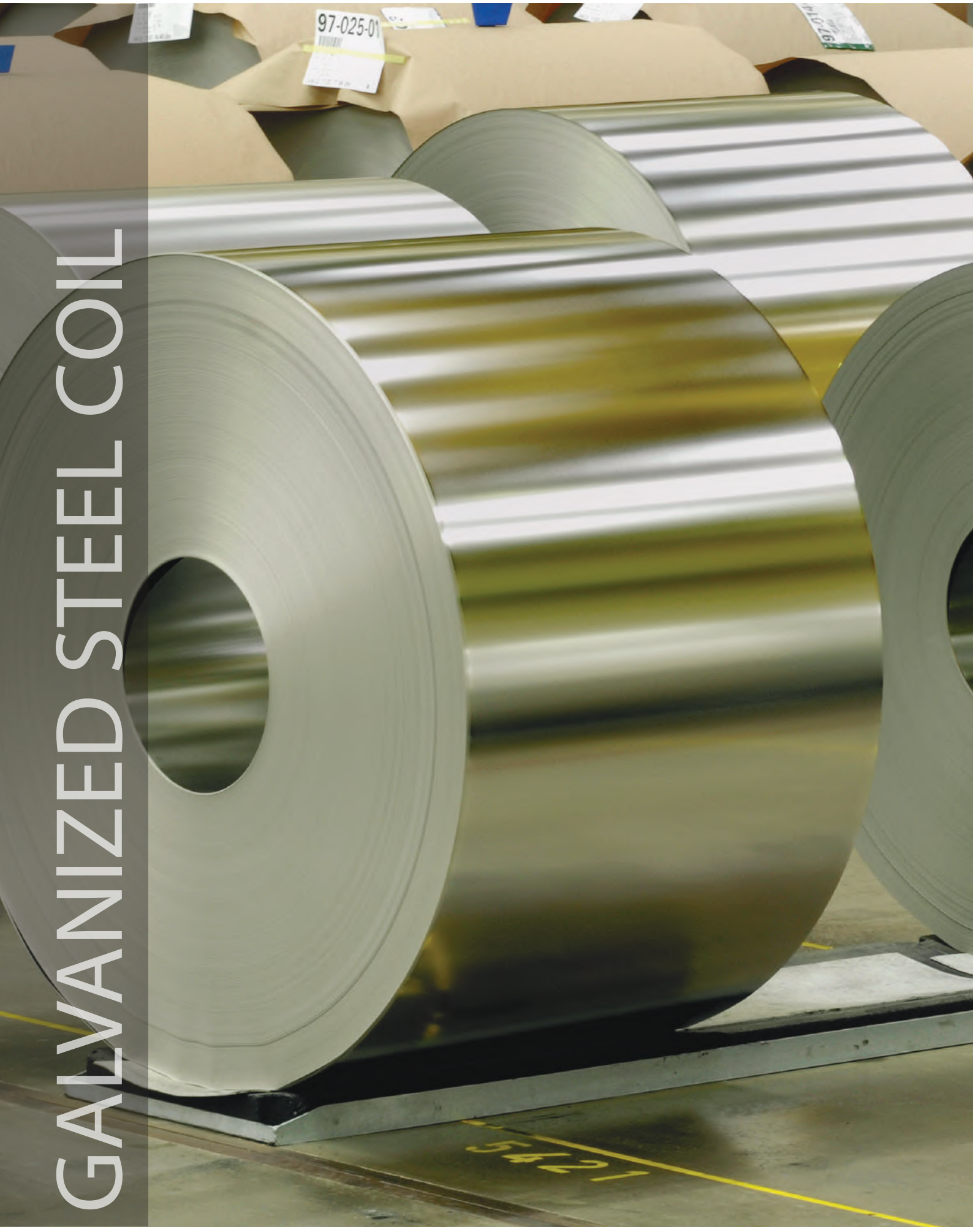
GENERAL INFORMATION ABOUT GALVANIZED PRODUCTS

	Min. (mm)	Max. (mm)
Thickness	0,25	3,00
Width	800	1530
Coil's Inner Diameter	508	610
Coil's Outer Diameter		2200
Coil Weight	5 ton	35 ton
Coating Weight	60 g/m2 (both sides)	600 g/m2 (both sides)
Sheet's Length	500	6000
Weight of sheets' package		8 ton
Slitting Width	60 mm	

Note: Sizes which are not specified/not included in the Production Limits Table are subject to negotiations. Coils may be produced with inner diameter of 508 mm or 610 mm.



GALVANIZED STEEL COIL



Solution Partner And Supply Center

PPGI - PREPAINTED GALVANIZED STEEL

COLOUR COATED PRODUCTS

Colour coating of coils means continuous applying of paint to flat steel strip (rolled in a coil shape) with polyurethane rolls using high-tech automation. Colour coated strip is continuously produced on the line as described in the below steps. Coils are opened, top and back surfaces of the strip are cleaned (by applying a special chemical agent and rinsing it off), chromated (an operation to increase the corrosion resistance and to enhance the paint adherence). After that the strip passes through the oven, and the primer is applied to it (paint is applied only to top surface, while back surface is covered with high adhesive polyurethane back coating paint). Thereafter, the strip passes through another oven. If colour coating is requested over the primer on both sides, the paint is applied as the last layer and the strip is dried in the furnace. Depending on the customer's request, protecting film may be applied, and the colour coated strip is rolled in a coil and packed. Galvanized strips, cold rolled strips and aluminium strips are used to apply the colour coating.

PRODUCTION LIMITS FOR COLOUR COATED FLAT PRODUCTS

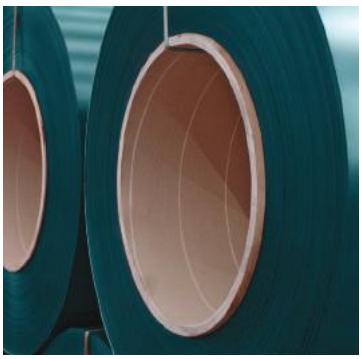
	Min. (mm)	Max. (mm)
Thickness	0,25	1,2
Width	800	1500
Coil's Inner Diameter	508	610
Coil's Outer Diameter		2200
Coil Weight	5 ton	32 ton
Sheet's Length	500	6000
Weight of sheets' package		8 ton
Slitting Width	60 mm	

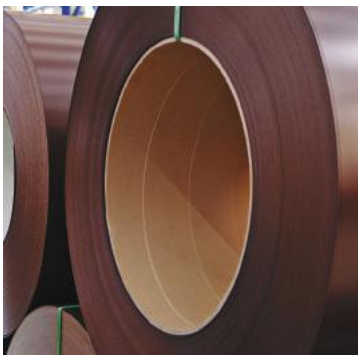
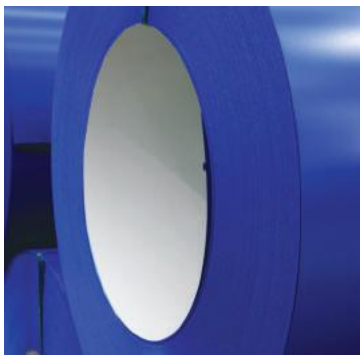
Note: Production of orders with 1500 mm width is subject to negotiations.

PPGI - PREPAINTED GALVANIZED STEEL

TOLERANCES TABLE FOR PRODUCTION OF COLOUR COATED COILS

	Polyester, PVDF, polyurethane -		Plastisol
Top coat paint thickness	Standard :20 ± 2µm, for metallic, luminous and nacred colours:18 ± 2µm,	Total top coat thickness 25 ± 3µm Total top coat thickness for metallic, luminous and nacred colours 23± 3µm	Ordered paint film thickness ± %10
Primer thickness for top coat and back coat	4 - 6 µm (5 ± 1µm)		4 - 6 µm (5 ± 1µm)
Back coat thickness	7 ± 1µm		
Colour difference for top coat	ΔE ≤1 (for metallic, luminous and nacred colours ΔE ≤2)		ΔE ≤ 2
60° top coat gloss %	Matt : ≤12		Matt : ≤12
	Low gloss: >12-≤22		Low gloss: >12-≤22
	Semi gloss: >23-≤45		Semi gloss : >23-≤45
	Gloss: >46-< 75		Gloss: >46-< 75
	High Gloss : ≥ 75		High Gloss : ≥ 75
MEK rub test for top coat	≥ 100, for metallic, luminous and nacred colours ≥ 50		-
MEK rub test for back coat	≥ 50		≥ 50
Adhesion test for top coat	≥ 6mm-0		≥ 6mm-0
Adhesion test for back coat	≥ 4mm-0		≥ 4mm-0
Pencil hardness for top coat	Min. F		-
T-bend test for top coat	Max. 2T		Max. 0.5 T
Back impact test	≥ 10 J		-



PPGI - PREPAINTED GALVANIZED STEEL

COLOUR COATED STRIPS PRODUCED DEPENDING ON THE PAINT TYPE

Based on the types of polymers which perform the role of binding agents in the composition of the paints to be used, colour coated flat products may be classified as shown below:

Polyester-based colour coated flat products: A wide range of colours, gloss selection and consumption-effectiveness are the strongest points of polyester paints. For this reason they are very commonly used.
At the same time, its elasticity and resistance to wear, corrosion, moisture and impact are also good. Low external resistance, chalking resistance and gloss strength may be specified as weak points. Thickness of the applied polyester paint film ranges between 20-25 µm depending on the application purpose and performance expected from the colour coated flat products. Although it is possible to apply paint film of greater thickness, but it is not really preferable because some weakness is revealed with regard to elasticity and surface appearance quality.

Polyester painted flat products are commonly used to produce roof cladding, siding, sandwich panels, garage gates, suspended ceilings, clamps, white goods and rainwater draining systems.

High durable polyester-based colour coated flat products: A type of paint with higher colour retention and flexibility properties (compared to regular polyester paints), whose usage increased in recent years, which is preferable for siding purposes, especially with composite panels. While polyester paints are evaluated as grade RUV2 with regard to UV resistance, high durable polyester paints, similar to PVDF paints, are evaluated as grade RUV4. Applied paint film thickness ranges between 20-25 µm, similar to thickness values for polyester paints.

PVDF-based painted flat products: The strongest points of PVDF paints are very good colour retention and gloss strength, chalking resistance and resistance to quite a large number of chemical substances. Its elasticity, resistance to wear and impact are also good. The following weak points may be specified: low resistance to scratching, smaller variety of colours and gloss compared to regular polyester paints, and, again compared to regular polyester paints, less application areas. Generally, thickness values for PVDF paint film range between 20 -25 µm.
Common usage areas for PVDF painted flat products: Having the best colour and gloss stability properties among the paint types, these paints are preferable for regions where sun exposure is very strong to produce roof cladding and siding, sandwich panels and, in addition, composite products and advertising boards.

Polyurethane-based painted flat products: This type of paint reinforced with polyamide has very high scratching and friction resistance. Polyurethane-based paints may be applied smoothly or with a pattern (PUR- PA Texture). Corrosion resistance, colour retention, gloss strength and formability are also good. Despite commonly applied film thickness for polyurethane paints is between 20-25 µm, thicker paint film may also be applied.
Common usage areas for polyurethane-based painted flat products: Due to high resistance to scratching, these paints are preferable for production of goods for which resistance to scratching is important, such as garage gates and roller shutters. Other application areas are roof cladding and wall siding.

Wrinkle polyester-based painted flat products: Flexibility is as high as that of polyamidee-based paints. Due to the fact that the grain structure and texture are different from those of other paints, these are colour-coated flat products which create visual difference. These products are used especially for production of roofing tiles. Paint film thickness depends on the requested type of texture (pattern) and colour.

Plastisol-based (PVC) painted flat products: Much higher thickness of the applied paint film is ensured, compared to other types of paint. Generally used thickness of dry paint film ranges between 100-200 µm. The strongest point of this paint is its very good resistance to corrosion and moisture. Thanks to this paint type, bending and forming are possible. One of the important properties is that embossing may be applied. Colour retention and gloss strength may be specified as the weakest points. For this reason, these paints are commonly used in regions where sun exposure is not very strong (e.g. Northern Europe).
Common usage areas for plastisol-based painted flat products: For the applications where UV-resistance is not so important, when high corrosion resistance is required, and also for roof cladding and wall siding.

Paint Type	Code	Bending resistance	Surface hardness	Resistance to chemical agents	Moisture resistance	Corrosion resistance	Colour retention and gloss strength
Polyester	PE	3,5	4	3	3	4	3
Kırışık (Wrinkle) Polyester	PE-WR	4	4,5	3	3	4	3,5
High Durable Polyester	HD-PE	4	4	3	3,5	4	4
Poliamid - Modifiye Polyester	PUR-PE	3,7	5	3	3,5	4	3
Poliamid - Modifiye Poliüretan	PUR-PA	4	5	3	3,5	4	3
Polivinilidenflorür	PVDF	4,5	3	5	5	4,5	5
Polivinil Klorür Plastisol	PVC (P)	5	2	4	4	5	2

Evaluation is made on the basis of 5 points.

RAL CATALOGUE

RAL 1000	RAL 1001	RAL 1002	RAL 1003
RAL 1004	RAL 1005	RAL 1006	RAL 1007
RAL 1011	RAL 1012	RAL 1013	RAL 1014
RAL 1015	RAL 1016	RAL 1017	RAL 1018
RAL 1019	RAL 1020	RAL 1021	RAL 1023
RAL 1024	RAL 1027	RAL 1028	RAL 1032
RAL 1033	RAL 1034	RAL 1037	RAL 2000
RAL 2001	RAL 2002	RAL 2003	RAL 2004
RAL 2008	RAL 2009	RAL 2010	RAL 2011
RAL 2012	RAL 3000	RAL 3001	RAL 3002
RAL 3003	RAL 3004	RAL 3005	RAL 3007
RAL 3009	RAL 3011	RAL 3012	RAL 3013
RAL 3014	RAL 3015	RAL 3016	RAL 3017
RAL 3018	RAL 3020	RAL 3022	RAL 3027
RAL 3031	RAL 4001	RAL 4002	RAL 4003
RAL 4004	RAL 4005	RAL 4006	RAL 4007
RAL 4008	RAL 4009	RAL 4010	RAL 5000
RAL 5001	RAL 5002	RAL 5003	RAL 5004
RAL 5005	RAL 5007	RAL 5008	RAL 5009
RAL 5010	RAL 5011	RAL 5012	RAL 5013
RAL 5014	RAL 5015	RAL 5017	RAL 5018
RAL 5019	RAL 5020	RAL 5021	RAL 5022
RAL 5023	RAL 5024	RAL 6000	RAL 6001
RAL 6002	RAL 6003	RAL 6004	RAL 6005
RAL 6006	RAL 6007	RAL 6008	RAL 6009
RAL 6010	RAL 6011	RAL 6012	RAL 6013
RAL 6014	RAL 6015	RAL 6016	RAL 6017
RAL 6018	RAL 6019	RAL 6020	RAL 6021
RAL 6022	RAL 6024	RAL 6025	RAL 6026
RAL 6027	RAL 6028	RAL 6029	RAL 6032
RAL 6033	RAL 6034	RAL 7000	RAL 7001
RAL 7002	RAL 7003	RAL 7004	RAL 7005
RAL 7006	RAL 7008	RAL 7009	RAL 7010
RAL 7011	RAL 7012	RAL 7013	RAL 7015
RAL 7016	RAL 7021	RAL 7022	RAL 7023
RAL 7024	RAL 7026	RAL 7030	RAL 7031
RAL 7032	RAL 7033	RAL 7034	RAL 7035
RAL 7036	RAL 7037	RAL 7038	RAL 7039
RAL 7040	RAL 7042	RAL 7043	RAL 7044
RAL 7045	RAL 7046	RAL 7047	RAL 8000
RAL 8001	RAL 8002	RAL 8003	RAL 8004
RAL 8007	RAL 8008	RAL 8011	RAL 8012
RAL 8014	RAL 8015	RAL 8016	RAL 8017
RAL 8019	RAL 8022	RAL 8023	RAL 8024
RAL 8025	RAL 8028	RAL 9001	RAL 9002
RAL 9003	RAL 9004	RAL 9005	RAL 9006
RAL 9007	RAL 9010	RAL 9011	RAL 9016
RAL 9017	RAL 9018		

STEEL SERVICE CENTER

GALVANIZED ROLLED SLITCOIL
DIMENSIONS

Thickness	Min.0.25 – Max. 3.0 mm
Coil İnner Diameter	508 mm; 610 mm
Coil Outer Diameter	Max.2000 mm
Slit Width	Min. 60 mm
Coating Weight	60 – 600 gr/m2 (Double Side)

PREPAINTED GALVANIZED SLITCOIL
DIMENSIONS

Thickness	Min. 0,25 – Max.1,20mm
Coil İnner Diameter	508 mm; 610 mm
Coil Outer Diameter	Max.2000 mm
Slit Width	Min. 60 mm
Types of paint	Polyester, Pvdf, Polyurethane, Plastisol and others

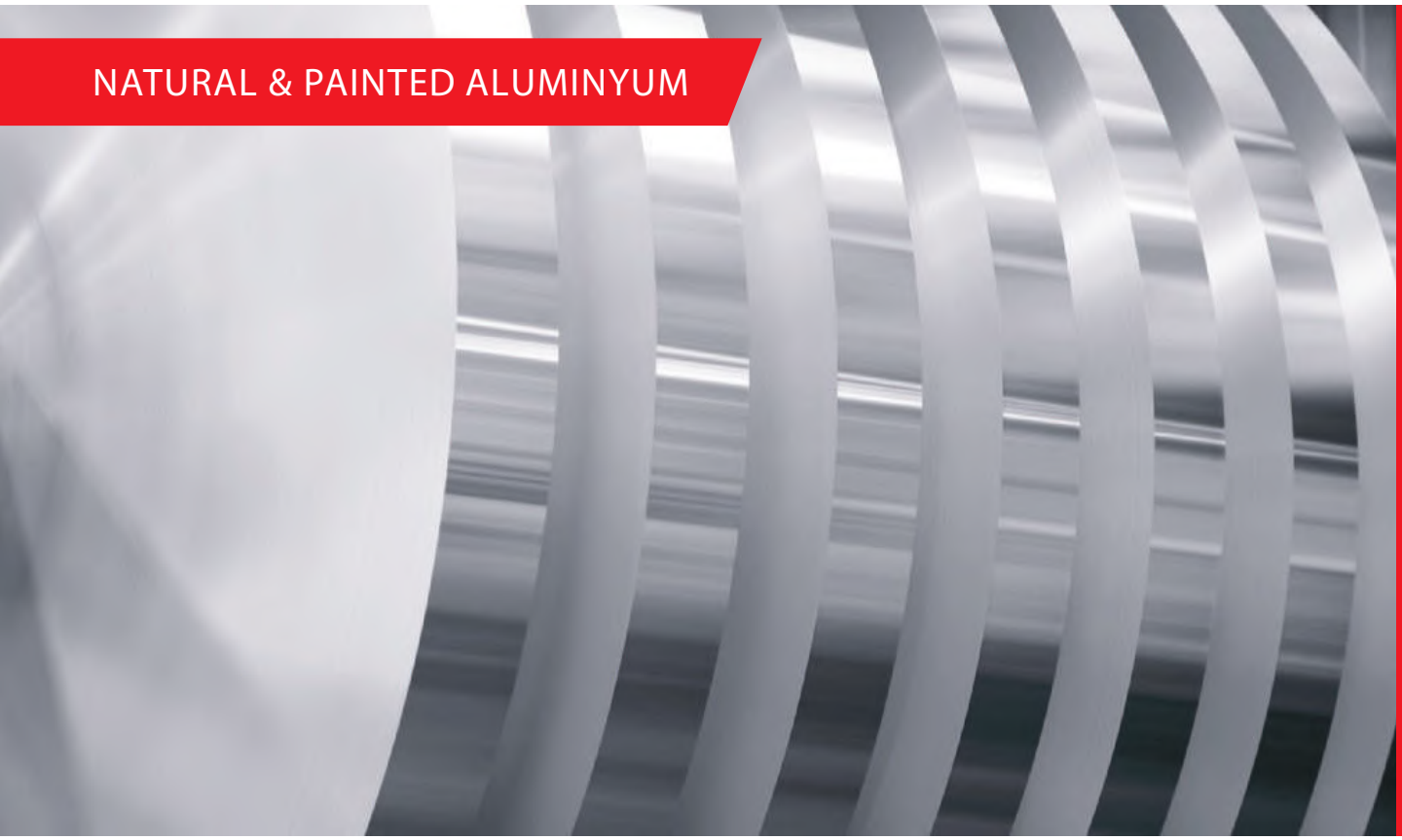
GALVANIZED ROLLED SHEET
DIMENSIONS

Thickness	Min.0.25 ; Max. 3.0 mm
Width	Min.800mm; Max. 1530 mm
Length	Min 500;Max 6000 mm
Package Weight	Max. 8 ton
Coating Weight	60 – 600 gr/m2 (Double Side)

PREPAINTED GALVANIZED SHEET
DIMENSIONS

Thickness	Min. 0,25 – Max.1,20mm
Width	Min. 800 – Max. 1550 mm
Length	Min 500-Max 6000 mm
Package Weight	Max. 8 ton
Types of paint	Polyester, PVDF, Polyurethane, Plastisol and others

NATURAL & PAINTED ALUMINYUM



NATURAL ALUMINYUM PLAIN COILS AND STRIPS

DIMENSIONS

Alloy	1XXX, 3003, 3005, 3103, 3105, 5005, 8XXX
Temper	F, H0, H111, H1X, H2X, H3X, DDQ (Deep Drawing Quality)
Thickness	Min. 0,10 mm. – Max. 4,00 mm.
Width	Min. 12,5 mm. – Max. 2.200 mm.
Outside Diameter	Max. 2.200 mm.
Inside Diameter	508 mm.
Coil Weight	Max. 15.000 kg.

EMBOSSED COILS AND STRIPS

DIMENSIONS

Alloy	1XXX, 3003, 3005, 3103, 3105, 5005, 8XXX
Temper	F, H0, H111, H1X, H2X, H3X, DDQ (Deep Drawing Quality)
Thickness	Min. 0.20 mm – Max. 1.50 mm.
Width	Min. 12.5 mm – Max. 1,750 mm.
Outside Diameter	Max. 2.200 mm.
Inside Diameter	508 mm.

NATURAL & PAINTED ALUMINYUM

PLAIN AND EMBOSSED SHEETS
DIMENSIONS

Alloy	1XXX, 3003, 3005, 3103, 3105, 5005, 8XXX
Temper	F, H0, H111, H1X, H2X, H3X, DDQ (Deep Drawing Quality)
Thickness	Min. 0,20 mm. – Max. 3,00 mm. (Plain)
	Min. 0,20 mm. – Max. 1,50 mm. (Embossed)
Width	Min. 500 mm. – Max. 2.200 mm.(Plain)
	Min. 500 mm. – Max. 1.750 mm. (Embossed)
Lenght	Min. 400 mm. – Max. 8.000 mm.

PAINTED ALUMINYUM
DIMENSIONS

Paint type	Polyester, PVDF,
Colour	RAL COLOURS
Alloy	1XXX, 3003, 3005, 3103, 3105,
Temper	H1X, H2X, H3X,
Thickness	Min. 0,30 mm. – Max. 1,00 mm.
Width	Min. 1000 mm. – Max. 2.500 mm.
Outside Diameter	Max. 2.200 mm.
Inside Diameter	508 mm.
Coil Weight	Max. 8.000 kg.

CORRUGATED SHEETS

provides its customers with single layer corrugated sheets as roof and wall coatings, at best price, in cases where thermal insulation is not necessary.

sandwich system with application of two plates of insulation materials. Glasswool, rockwool, extruded polystyrene, expanded polystyrene, polyurethane sheets can be used in this application as insulation material.
Single layer corrugated sheets can be produced as dyed aluminum aside from dyed galvanized sheet, non-dyed galvanized sheet. Offering the couple of

to the quality.

Dyed galvanized sheet coils produced in accordance with the ECCA (European Coil Coating) standards imported from the globally leading sheet manufacturers are used at the dyed galvanized sheet products within the single layer corrugated sheets. As for non-dyed galvanized sheet products, non-dyed galvanized sheet

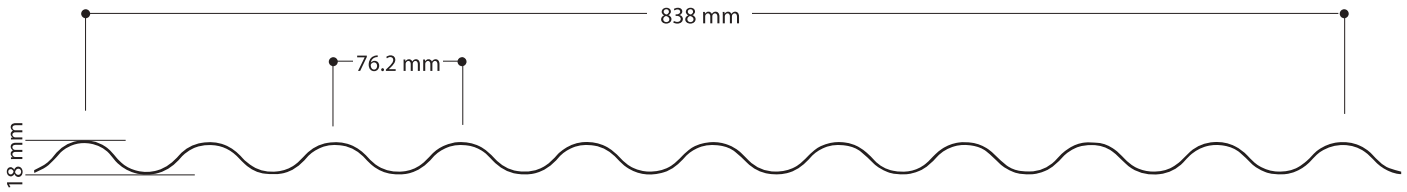
the international standards (EN,ASTM and ISO).

radius (curve) shape, it is possible to apply coating with application in place of a thermal insulation layer between two layers of corrugated sheets at the vaulted roofs with aesthetic appearance. Another area where the single layer corrugated sheets are used are the terrace roofs. In such applications,

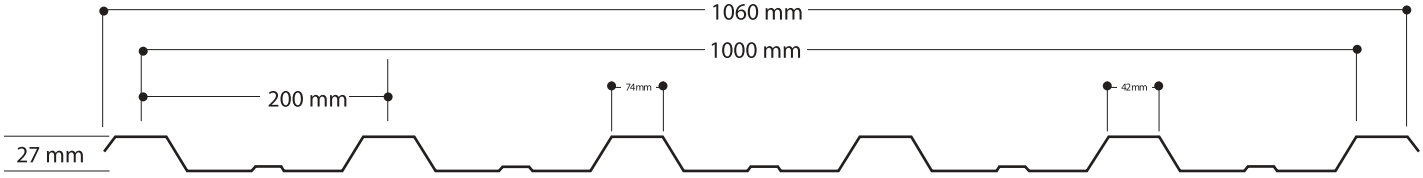
the values of the project provided by the customers, performs production according to the vaulted roofs, in the computer-controlled bending machine with an affordable price and high quality. Form 27/200 corrugated sheet, form 38/151 corrugated sheet, form 18/838 corrugated sheet, form 50/207 corrugated sheet, form 38/151 acoustic corrugated sheet and form 75/215 corrugated sheet are produced. It gives the advantage of easy and fast assembly on roof and wall, saving on the bearing construction thanks to its lightness, does not take a big place in construction sites and warehouses, is environment friendly due to its recycling feature. Areas of application; It offers safe and affordable solutions of high quality in the buildings whose load-bearing system is of steel and prefabricated concrete, such as industrial buildings, military buildings, social buildings, agricultural buildings, sports facilities, construction sites, silos, hypermarkets, shopping malls and marke tplace buildings.

layer corrugated sheets in the bending machine. The production in requested amounts and dimensions are available at affordable price and high quality.

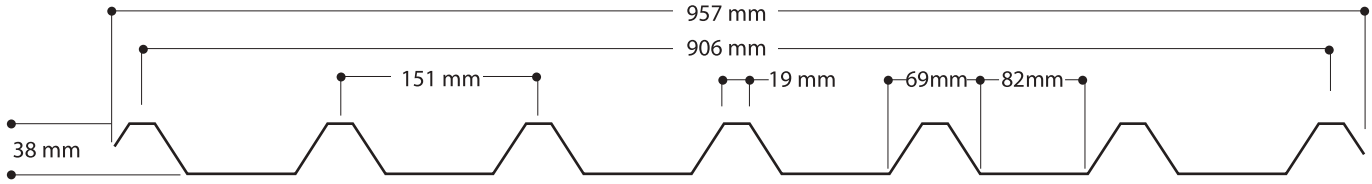
18/838 Sinus Roof&Wall Trapezoidal Sheet



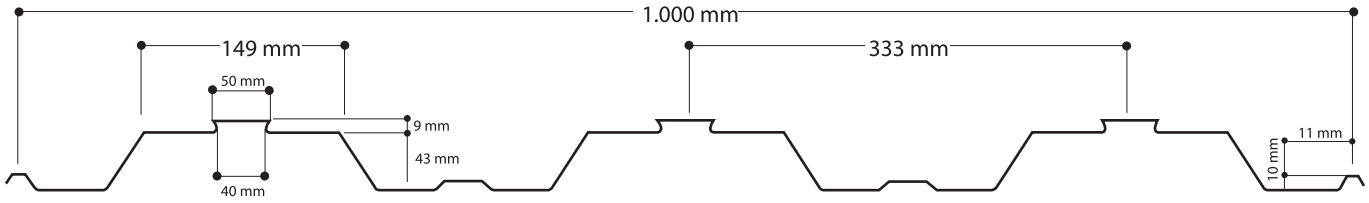
27/200 Roof&Wall Trapezoidal Sheet



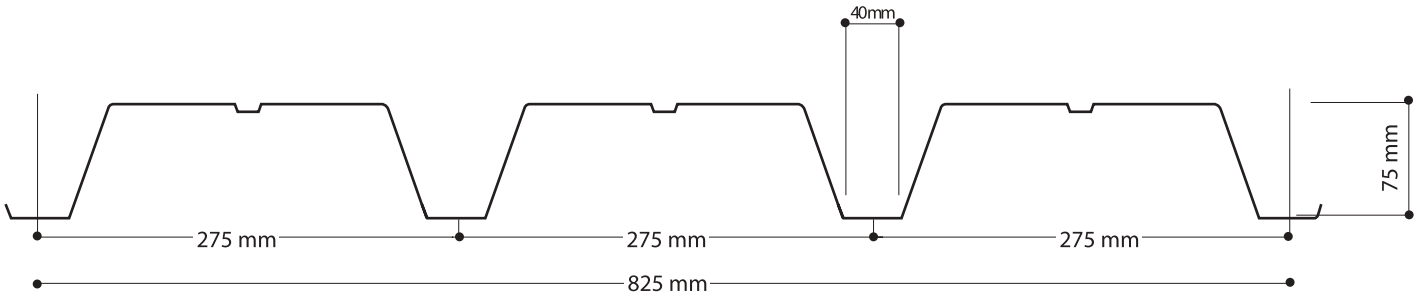
38/151 Roof&Wall Trapezoidal Sheet



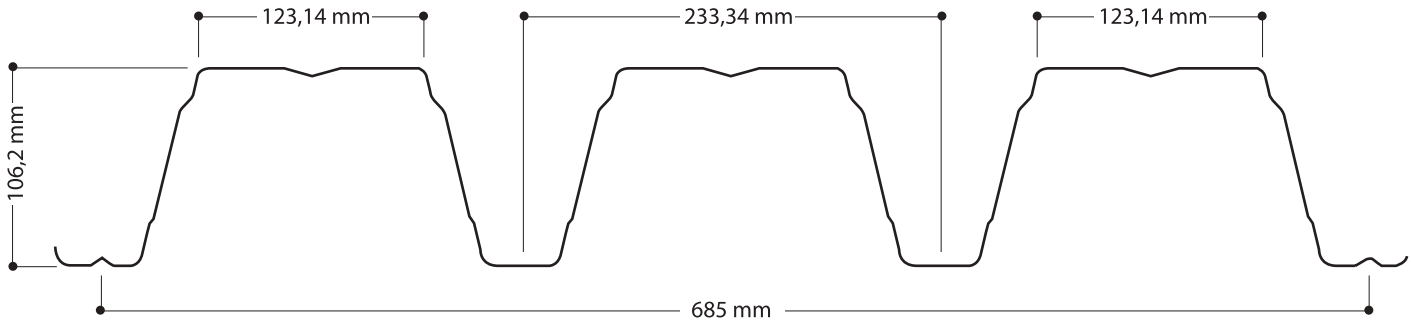
53/1000 Embosed Deck Trapezoidal Sheet



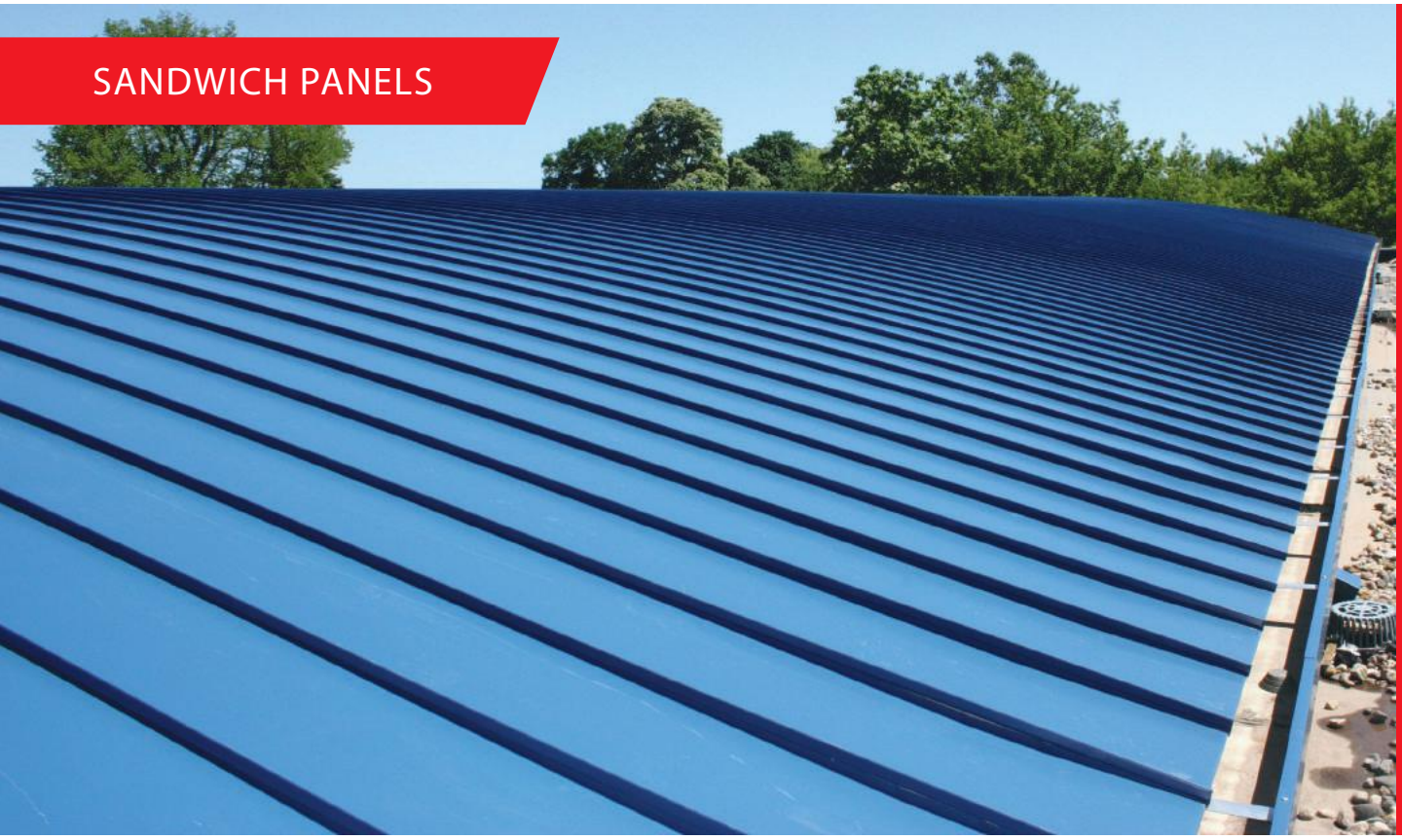
75/825 High Pitch Trapezoidal Sheet



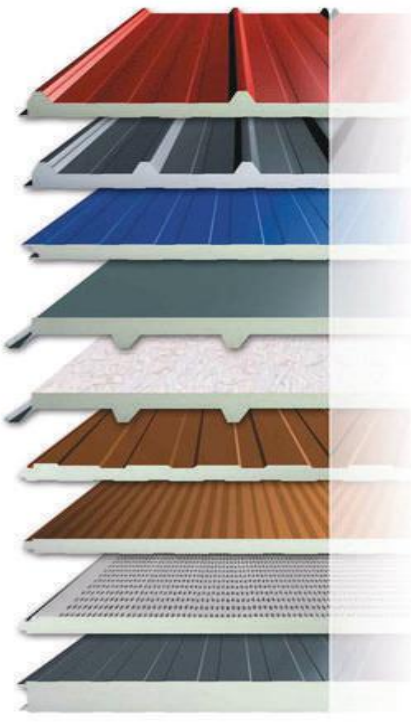
110/685 High Pitch Trapezoidal Sheet



SANDWICH PANELS



Sandwich Panels



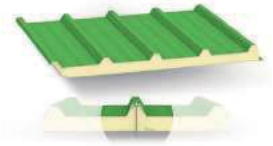
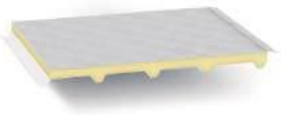
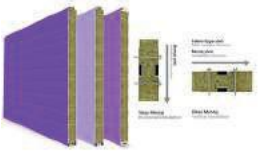
Sandwich panels are composite materials produced of two dyed Galvanized or Aluminum corrugated plates filled (with PIR, PUR, Rock wool) for thermal insulation.

Used as coating materials in the roof, wall and internal partition or cold rooms of the buildings, sandwich panels provide a quite high level of thermal, water, sound insulation; prevent moisture condensation. In addition, they are distinguished with their bearing capacity as well. Bearing capacity of the sandwich panel depends on the density, thickness of its filling material and the form of its metal surfaces. Sandwich panel is an economical solution when assessed within the context of cost-benefit analysis.

Thickness of the metals (DGS, Aluminum) and filling materials is determined in accordance with the area of usage and the amount of load they will bear. The climate conditions of the region of usage should be taken into account while determining the thickness of the filling material. Sandwich panels set the outer shell of the buildings in an aesthetic and affordable way by providing thermal, water and sound insulation without the need for any coating such as plaster or dye.

They are procured with the best prices and used in the buildings whose load-bearing system is of steel and prefabricated concrete, such as industrial buildings, military buildings, social buildings, agricultural buildings, sports facilities, construction sites, silos, hypermarkets, shopping malls, cold storage depots and marketplaces.

The products to meet the requirements of any kind of architectural project are produced with aluminum or dyed galvanized sheet metals, in requested amounts and dimensions at Starmet yapi.

Product Name	Product Picture	Insulation Core Material		
		Polyurethane (PUR)	Polyisocyanurate (PIR)	Rockwool
		Thickness(mm)		
5 Ribbed Roof Panel		40-50-60-80-100-120 150-180-200	40-50-60-80-100 120-150-180-200	-
5 Ribbed Roof Panel		-	-	50-60-80-100 120-150
3 Ribbed Roof Panel		40-50-60-80-100-120 150-180-200	40-50-60-80-100 120-150-180-200	-
5 Ribbed Roof Panel with Membrane		40-50-60-80-100 120-150-180-200	40-50-60-80-100 120-150-180-200	50-60-80-100 120-150
Secret Fix Wall Panel		40-50-60-80-100-120 150-180-200	40-50-60-80-100 120-150-180-200	-
Secret Fix Wall Panel		-	-	50-60-80-100 120-150
Outer Screw Fix Wall Panel		40-50-60-80-100 120-150-180-200	40-50-60-80-100 120-150-180-200	50-60-80-100 120-150
Cold Room Panel		80-100-120-150 180-200	80-100-120-150 180-200	-
H Wall Panel		40-50-60-80-100 120-150-180-200	40-50-60-80-100 120-150-180-200	-
Core Density (kg/m³)		40	42	90-100-110-120
Thermal Conductivity (W/mK)		0.022	0.02	0,035 ≤ λ ≤ 0,040

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