



Metal Products

Saudi Iron and Steel Company (Hadeed) is wholly owned by the Saudi Basic Industries Corporation (SABIC). It is the first integrated iron and steel complex in the Kingdom of Saudi Arabia. HADEED started production by the beginning of 1983 with an annual design capacity of 800,000 metric tons of long products. Hadeed's Flat Products Complex with an annual design production capacity of 850,000 tons of hot rolled, cold rolled and galvanized flat steel products started commercial production in January 2000.

Following several enhancements and expansions, the annual production capacity HADEED facilities exceeded 3.3 million metric tons of long products, and 1.8 million metric tons of flat products.

HADEED products are as follows:

- ▶ **Long Products** : Reinforcing bar, Wire rod coils, Rebar-in-coil, Light sections and Steel billets.

- ▶ **Flat products:** Hot rolled, Cold rolled, Galvanized and color coated products and Steel slabs.

Flat Products

SABIC offers a broad range of hot rolled and cold rolled flat products in the form of both Coils and Slit Coils. These products are suitable for a wide range of applications. The following are the four types of Products:

- Hot rolled Coil
- Cold Rolled Coil
- Hot Dip Galvanized Coil
- Pre Painted Coil

Hot Rolled Coil

SABIC offers a broad range of hot rolled products in the form of both Coils and Slit Coils.

These products are suitable for a wide range of applications, from formable quality to specific strength requirement in material. SABIC can supply Hot Rolled Coils as Mill Edged, Side Trim Edged, Slit, Skin Passed, Chequered and Pickled Coils.

Product Forms



Hot Rolled Coil



Hot Rolled Slit coil



Hot Rolled Chequered Coil

Hot Rolled Grade Ranges

- Commercial
- API*
- HSLA
- Structural
- Pressure Vessel
- Corten Steel
- Chequered steel

*API 5L Grade can be produced to cover both sour and non-sour applications::

Non-Sour

Gr. B, X42, X46, X52, X56, X60, X65, X70, X80

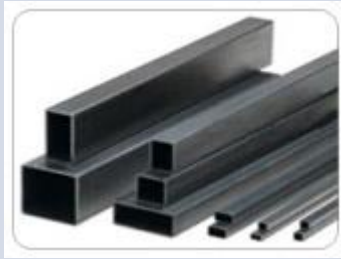
Sour

Gr. B, X42, X46, X52, X60, X65

Dimensions / Sizes

Non- Pickled	Thickness (mm)		Width (mm)		Inner Dia (mm)
	From	To	From	To	
Hot Rolled Coil	4	6	850	1650	610
Hot Rolled Coil Mill Edge	1.2	17.5	850	1650	762
Hot Rolled Coil Trim Edge	1.5	8	850	1600	762
Hot Rolled Slit Coil	1.5	8	75	800	762
Pickled	Thickness (mm)		Width (mm)		Inner Dia (mm)
	From	To	From	To	
Hot Rolled Coil	1.5	6	850	1650	610
Hot Rolled Slit Coil	1.5	6	75	800	762
Others	Thickness (mm)		Width (mm)		Inner Dia (mm)
	From	To	From	To	
Hot Rolled Skin Pass Coil	1.2	4	850	1600	762/610
Hot Rolled Chequered Coil	1.6	8	850	1500	762

Uses & Applications



Commercial Steel

Steel sheets

Steel commercial tubes

Corrugated sheets

Other general fabrications



Structural Steel

Steel structures

Lighting poles

Electric transmission poles



API Steel (Steel for sour & non- sour applications)

Oil & gas pipelines

Water pipelines



Steel for Pressure Vessels

Pressure vessels tanks

Gas cylinders



Corten steel (for atmosphere corrosion applications)

Steel containers



Chequered steel (for anti-slip applications)

Floors

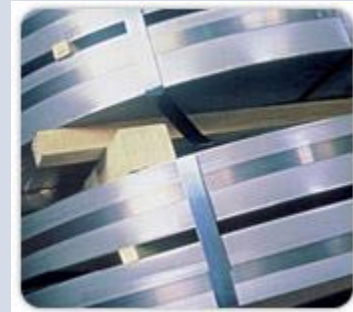
Cold Rolled

SABIC offers a broad range of Cold Rolled products in the form of both Coils and Slit Coils with excellent surface quality and mechanical properties that include hardness, tensile and ductility that are more suitable for many sophisticated manufacturing applications other than those satisfied by SABIC Hot Rolled Products portfolio.

Product Forms



Cold Rolled Coils



Cold Rolled Slit Coils

Properties

Full Hard

High hardness, low tensile strength and ductility.

Annealed

As cold rolled full hard coils are not suitable for most applications due to high hardness, ultimate tensile strength and low ductility, the coils are annealed to the recrystallization temperature in the Batch Annealing Facility (BAF) to improve the workability for various applications.

Tempered

The surface roughness of Cold Rolled Coils and Cold Rolled Slit Coils is controlled by tempering.

Dimensions / Sizes

Product	Thickness (mm)	Width (mm)	Inner Dia. (mm)	Outer Dia. (mm)
Cold Rolled Coils	0.3 - 3	850-1650	610	1950
Cold Rolled Slit Coils	0.3 - 3	75/800	610	1950

Uses & Applications



Commercial Quality (CQ)

For applications that involve simple bending or moderate forming. Sheets of such quality can be bent fully in any direction at room temperature, and used for manufacturing home appliances (ovens, water heaters, refrigerators).



Structural Quality (SQ)

For applications in which the strength of the finished part, usually in load bearing structures, is of importance. In those cases, the mechanical properties required in the steel sheet as ordered must be specified. Such quality is used for manufacturing storage systems and shelves.



Drawing Quality (DQ)

For applications that need greater degree of ductility, and it is more consistent in performance than CQ because of higher standards in production, selection and melting of steel. It is used for manufacturing furniture (tables), and wheel barrows.



Deep Drawing Quality (DDQ)

When deep drawing qualities are required, the carbon may be reduced even further than the level for the DQ.



Extra-Deep Drawing Quality (EDDQ)

For applications that need ultimate formability. Steel is vacuum degassed to provide superior internal cleanliness and reduced carbon levels. Stabilizing elements added during steel production combine with carbon and nitrogen to make it even more formable.

Hot Dip Galvanized Coil

A well protected steel with uniform galvanized coating thickness and excellent mechanical properties. It is manufactured to have a long durability, strong corrosion resistance and shiny surface.

SABIC Galvanized Steel features excellent forming properties, paintability, weldability, and is suitable for fabrication by forming, pressing and bending. Applications include domestic applications, building applications (e.g. wall elements, roofing applications...), automotive applications, lighting fixtures, drums and various kinds of section applications, profiled sheets.

Product Forms



Cold Rolled Galvanized Coils (also available in Slit Form)

Coating

- G90 (375g/m²) • G60 (180g/m²) • G40(120g/m²) • G30 (90g/m²)

Extra services available:

- Cromating • Oiling • Skinpassing with mini, zero or regular spangle surface.

Dimensions / Sizes

Processed Product	Thickness Range (mm)	Width Range (mm)
Galvanized Coil	0.3 to 2.0	850 to 1400
Galvanized Slit Coil	0.3 to 2.0	75 to 800
Inner diameter : 610 (510 mm on prior agreement)		
Outer diameter : 1950 mm max		

Products Qualities

- CQ - Commercial Quality steel for structural applications
- SQ - Structural Quality steel for applications that need more draw ability
- LFQ - Lock Forming Quality
- DQ - Drawing Quality
- DDQ - Deep Drawing Quality
- EDDQ - Extra Deep Drawing Quality

Example of Uses & Applications

	Commercial Quality (CQ) Steel Drums		Lock Forming Quality (LFQ) Washing Machines
	Structural Quality (SQ) Steel Mesh		Drawing Quality (DQ) Food Microwaves
	Extra Drawing Quality (DDQ) Air-Conditioning Ducts		Extra Deep Drawing Quality (EDDQ) Car Fuel Tanks

Pre Painted Coil

SABIC offers a wide range of Pre Painted steel products through owning a sophisticated line at Hadeed affiliate. Customers various demands can be satisfied through substrates the line is capable to paint on, capability on Size range, coating textures that has the following advantages:

- Beautify
- Various Colors
- Uniform surface/finish
- Long Durability of product
- Color Stability
- Chemical Resistance
- Good adhesion of the paint film
- Corrosion protection

Product Forms



Pre Painted Coils (Slit Pre Painted Coils option is available)

Product Range

Hot Lamination

1. Surface finish

- Glossy
- Semi Glossy
- Matte Finish

2. Hot Film

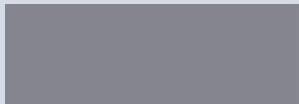
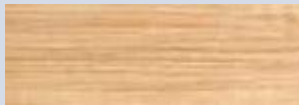
As per required lamination type

Emboss Coils

Embossing on Plastisol Paint

Cold Lamination

All above product can be produced with protect film (cold lamination)



Hot Lamination

Wood Glassia GP J881

Hot lamination

Glassia GPJ 4001

Plastisol

RALL9002

Polyester

RAL2012

SABIC White

Polyester

Product Qualities

- CQ – Commercial Quality • DQ – Drawing Quality
- LFQ – Lock Forming Quality • EDQ- Extra Drawing Quality
- SQ - Structural Quality • EDDQ- Extra Deep Drawing Quality

Dimensions / Sizes

Thickness range	Min	Max
GI, CR, Galvalum	0.25 mm	1.60 mm
Aluminum	0.50 mm	1.60 mm

Width range	Min	Max
Coating Line	500 mm	1.400 mm
Hot Laminator	500 mm	1.250 mm

Coil weight	Min	Max	
		ETW	ETS
GI, CR, Galvalum	2 Ton	12 Ton	7 Ton
Aluminum	2 Ton	5 Ton	4.5 Ton

Coil diameter	Min	Max
Inner diameter	Ø508 mm	Ø610 mm
Inner diameter	Ø700 mm	Ø1.600 mm (GI, CR, Galvalum coils) Ø1.400 mm (Aluminum Coils)
Inner diameter with or without cardboard/steel sleeve		

Paint Standards & Thickness

Plastisol

Coating	Position	Finish	Paint Type
Finish Coater	Top	50 - 200 µm	Plastisol
	Bottom	5 - 10 µm	Polyester, Epoxy

SABIC Steel Color Painting Types

Polyester

PVDF

Plastisol

SMP

HDF

Polyurethane

Epoxy

Acrylic paint

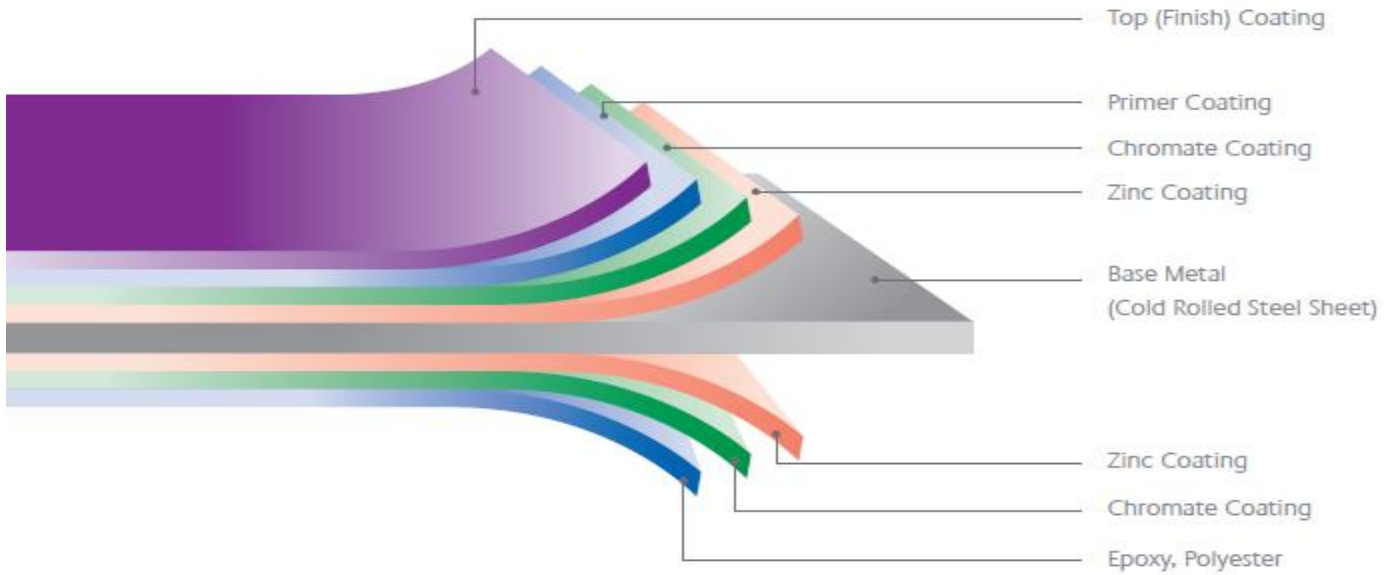
Coating	Position	Finish	Paint Type
Primer Coater	Top	20 - 50 µm	Plastisol Primer
	Bottom	5 - 10 µm	Polyester, Epoxy

All other paint types

Coating	Position	Finish	Paint Type
Finish Coater	Top	10 - 25 µm	Polyester, Epoxy, PVDF, SMP, HDF, Polyurethane, Acrylic
	Bottom	5 - 10 µm	Polyester, Epoxy

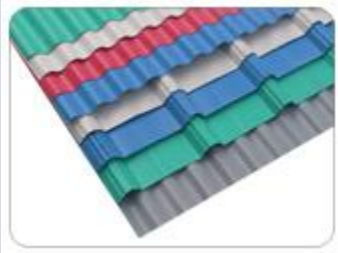
Coating	Position	Finish	Paint Type
Finish Coater	Top	5 - 10 µm	Polyester, Epoxy, PVDF, Plastisol (only for PVDF, Plastisol topcoat)
	Bottom	10 - 10 µm	Polyester, Epoxy

Coating Layer Layout



End Application

Pre Painted steel products are used in different activity sectors such as construction (roof, wall and ceiling claddings, lighting, radiators etc.), general industry (office furniture, heating, ventilating, air conditioning), domestic appliances (refrigerators, washing machines, small kitchen appliances, computer casings, VCR & DVD casings, etc...) packaging.



Corrugated Sheets



Household Furnitures



Cold Storage



Pre Engineering Buildings



Garage Doors



Sandwich Panels

Packaging

The most appropriate available packaging specification should be selected, based on the material type, surface treatment, the end use of the material and the time period that the steel coils will be held in storage.

Hot Rolled Coils

Local

- Local Straps (2 circumferential & 3 axial)
 - Labels on both sides



Export

- Steel Straps (3 circumferential & 4 axial)
 - Labels on both sides



Hot Rolled Slit Coils

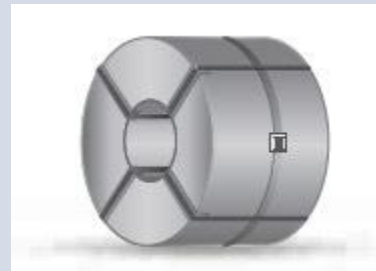
Local

- Steel Straps (1 circumferential strap per slit) (4 axial straps for every slit coil)
- Edge protectors (U -shape metal plate)
 - Labels on each slit coil



Export

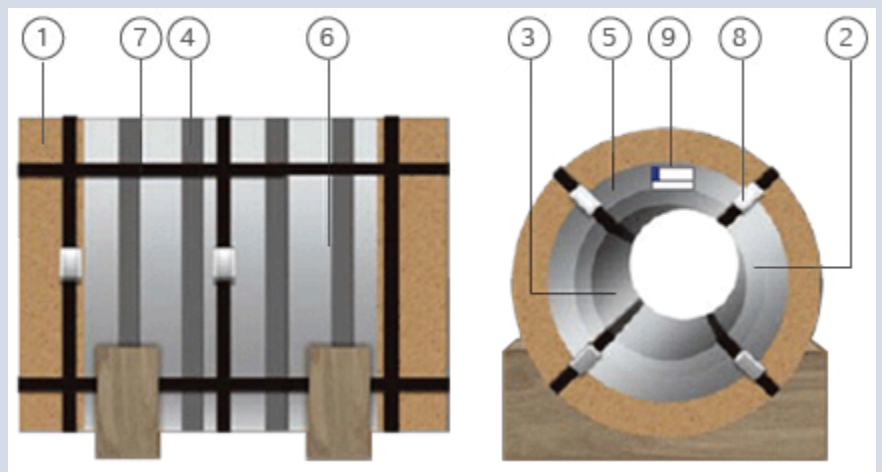
- Steel Straps (1 circumferential strap per slit) (4 axial straps for every slit)
- Edge protectors (U -shape metal plate)
 - Labels on both sides



Cold Rolled Coils

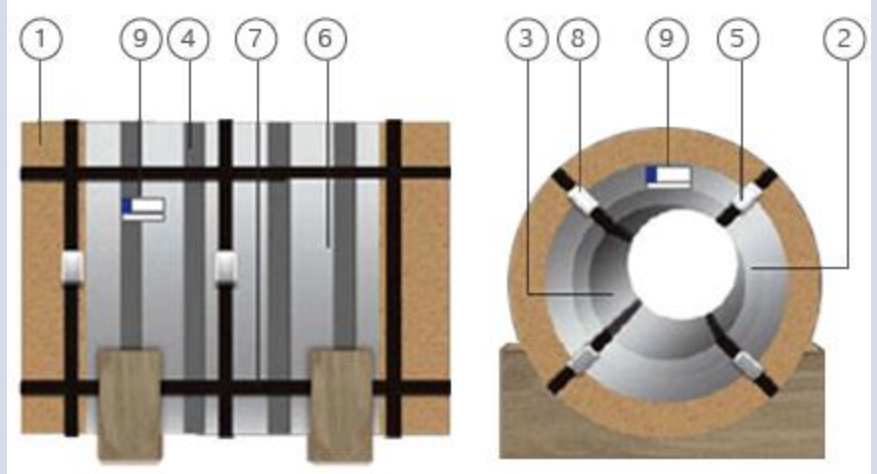
Export

- Steel Strap (3 Circum. & 4 axial)
- Edge Protector (0.5 -0.8 mm Galvanized steel)
- Packing Paper (PE-coated)
- Inner Diameter Ring (1.0 - 1.2 mm HRC Steel)
- Eye Blank/Side Covers (0.4 - 0.8 mm Galvanized Steel)
- Inner & Outer Cover (0.4 -0.8 mm Galvanized Steel)
 - Labels on both sides
- Clear Plastic (if required by customer instead of metal cover)
- Strap seals (Signode)



Local

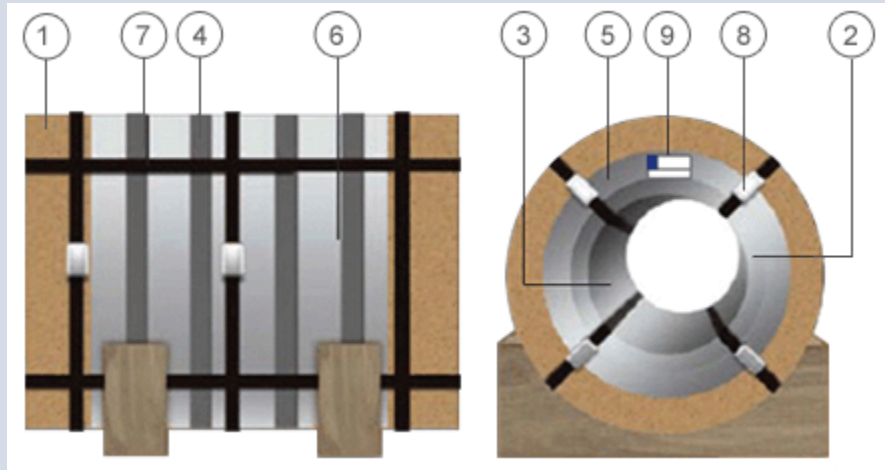
1. 1. Steel Strap (3 circum. & 4 axial
 2. Edge Protector (Kraft Hardboard Paper)
 3. Packing Paper (PE-coated)
 4. Inner Diameter Ring (Plastic)
 5. Side Covers (Paper)
 6. Inner & Outer Cover (0.4 - 0.8 mm Galvanized Steel)
 7. Labels on both sides
 8. Clear Plastic (if required by customer instead of metal cover)
 9. Strap seals (Signode)
- Note:** Coil slitting option is available



Hot Dip Galvanized Coils

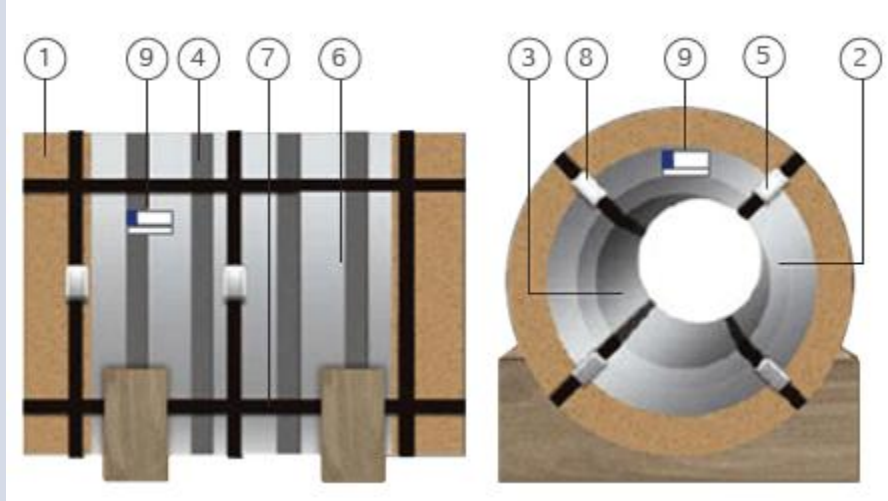
Export

1. Corrugated metal edge protectors (0.6 - 1.2 mm thickness/ galvanized)
2. Reinforced inner rings (1.0 - 1.5 mm thickness / HRC)
3. Inner metal plate (0.3 - 0.8 mm / galvanized)
4. Outer metal plate (0.3 - 0.7 mm / galvanized)
5. Metal eye blanks (0.4 - 0.8 mm / galvanized)
6. Packing paper (PE coated)
7. Steel Strap (31.75 x 0.8 mm)
8. Circumferential straps, 4 axial straps
9. Strap seals (Signode)
10. Labels / Stickers (with HADEED logo) pasted on both sides of the eyeblanks indicating the material size, specifications, quality and weight



Local

1. Kraft hardboard edge protectors
 2. Plastic inner rings
 3. Inner metal plate (0.3 - 0.8 mm / galvanized)
 4. Outer metal plate (0.3 - 0.7 mm / galvanized)
 5. Wrapping paper (folded and serves as eye blanks)
 6. Packing paper (PE coated)
 7. Steel Strap (31.75 x 0.8 mm) 3 circumferential straps, 4 axial straps
 8. Strap seals (Signode)
 9. Labels / Stickers (with HADEED logo) pasted on both sides of the eye blanks indicating the material size, specifications, quality and weight
- Note:** Coil slitting option is available



PPGI Packing (For Local & Export)

1. VCI Paper: Size: WD 6.5 X LG 2000 FT (WD 2 M X LG 610 M).
2. Inner Edge Corner Board Size: ID 595 X OD 755 MM
3. Inner Cover Sheet Size: WD 850-1650 X LG 2000 X TH 0.35-0.70 MM
4. Metal Seal: Size: WD 56 X LG 88 X HT 1 MM
5. Plastic Pad: Size: WD 91 X LG 99 X THK 8.75 MM
6. Metal Strap: Size: WD 31.75 X THK 0.8 MM
7. Edge Protector Metal: Size: WD 95 X LG 1750 X THK 95 MM

- 8. Metal ID Ring: Size: ID 595 X OD 755 MM
- 9. Eye Blank Metal (Side Cover): Size: OD 508 – 2000 MM
- 10. Sticker (GraphiPlast Label): Size: A5
- 11. Outer Cover Sheet: Size: WD 850-1650 X LG 2000 X TH 0.35-0.70 MM
- 12. Wooden Pallet: Size: WD 900-1450 X LG 900-1450 X HT 156 MM

1 VCI Paper
Size: WD 6.5 X LG 2000 FT
(WD 2 M X LG 610 M).

2 Inner Edge Corner Board
Size: ID 595 X OD 755 MM

3 Inner Cover Sheet
Size: WD 850-1650 X LG
2000 X TH 0.35-0.70 MM

4 Metal Seal.
Size: WD 56 X LG 88 X HT
1 MM

5 Plastic Pad
Size: WD 91 X LG 99 X THK
8.75 MM

6 Metal Strap
Size: WD 31.75 X THK 0.8
MM

7 Edge Protector Metal
Size: WD 95 X LG 1750 X
THK 95 MM

8 Metal ID Ring
Size: ID 595 X OD 755 MM

9 Eye Blank Metal (Side Cover)
Size: OD 508 – 2000 MM

10 Sticker (GraphiPlast Label)
Size: A5

11 Outer Cover Sheet
Size: WD 850-1650 X LG
2000 X TH 0.35-0.70 MM

12 Wooden Pallet
Size: WD 900-1450 X LG
900-1450 X HT 156 MM

● Using in All Types of packing ● Using for Local & PPGI packing