



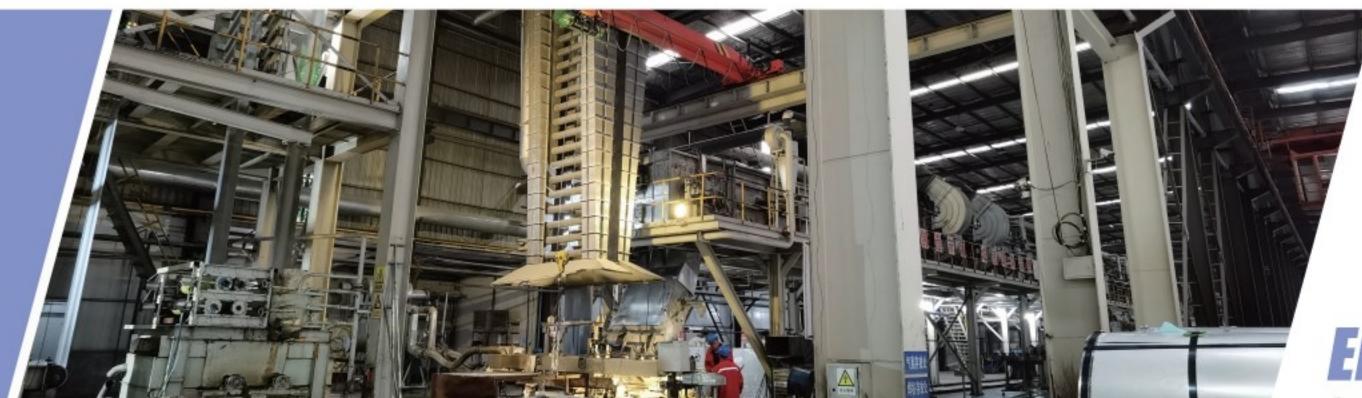
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Package for Products

## COMPANY INTRODUCTION

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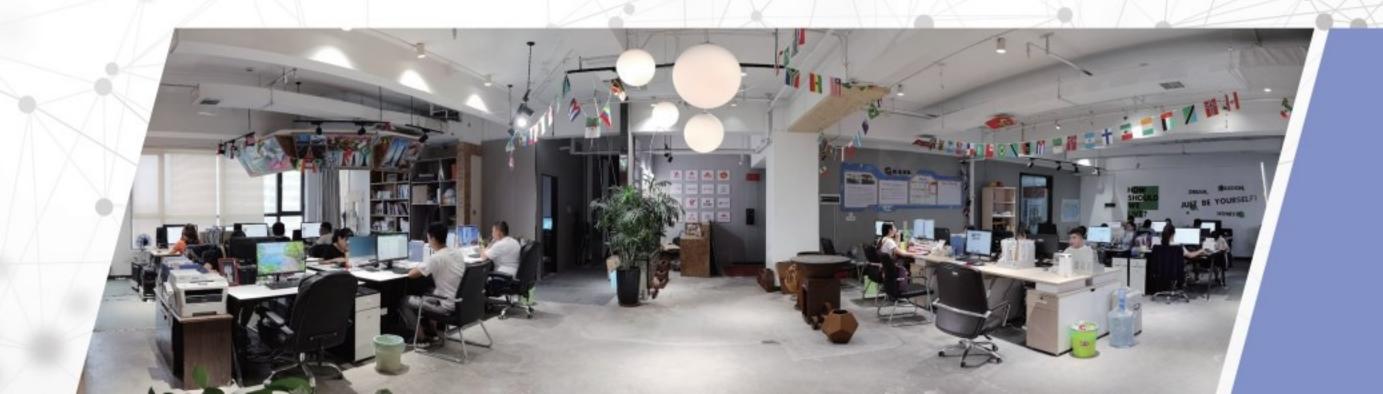
Enterprise Chapter

One-stop Service for Processing, Packaging and Storage

Gnee steel group is a supply chain integrated enterprise including steel plate, coil, profile, outdoor landscape design and processing. Founded in 2008, with 5 million RMB registered capital, Gnee has made impressive progress and development in steel market with Gnee People more than 10 years hard fighting. At present, the total investment amount reaches 30 million RMB, workshop area more than 1400m², with over 100 employees. Gnee is becoming the most professional international steel supply chain company in China central plains with explicit strategic framework, integrated governance structure, firm management foundation, abundant fund and human power.

Group has 5 subsidiary corporations, located in Anyang, Tianjin, Hongkong and Singapore countries and districts. Headquarters is in hometown of oracle in Henan province, location of world cultural heritage" Yin Ruin", Anyang city, one of eight ancient capitals of China.

"Great country attaches importance to heavy industry and bridge the world" are our lofty mission. "Craftsmanship quality and service to the world "are our unremitting pursuit. "Mutual benefit and achieving win-win situation "are our aspiration. Facing the future, GNEE will continuously build national brand, provide high quality goods and first-class services both domestic and foreign customers, devote to building the world's most competitive steel supply chain enterprises and become a large-scale world-class enterprise group.







## Certificates

Technology first, quality as priority, striving for excellence, integrity for future.

































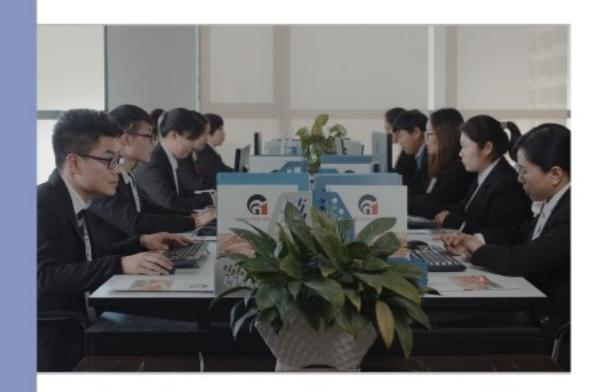




# Team Coagulating Strength

GNEE is committed to building a strong and efficient team. It not only meet the personal development but also achieve the maximization of business efficient. The unity and cooperation among employees have great power, which makes GNEE Exciteits great potential.



















## **Team Demeanor**

We usually organize rich activities for employees to create a good working environment. Supply convenient living facility and relaxing space of entertainment for them.

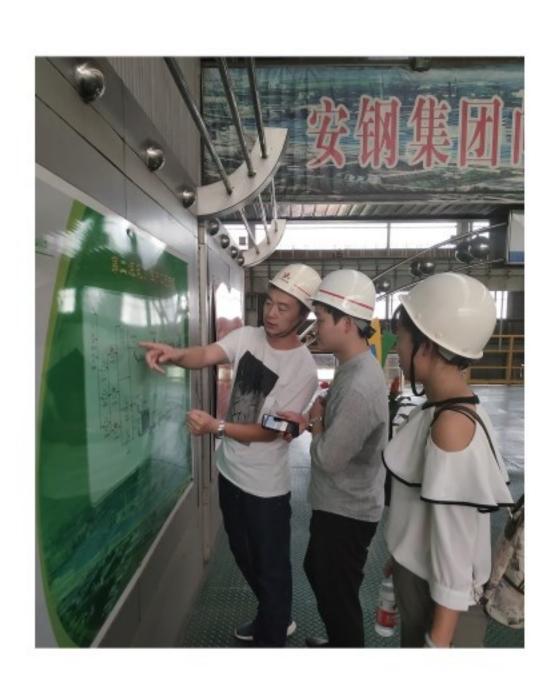






## **Customer Visiting**

Gnee exports steel to more than 70 countries, cooperates with over 600 companies in worldwide, among which are 15 shipyards, 143 project engineering companies, 23 boiler machinery manufacturers. Annual export capacity reaches over 80000 metric tons.



The group adheres to the tenet of "intentional management, customer priority, coordinated development and dedication to society" and abides by the business philosophy of "technology first, quality as priority, striving for excellence, integrity for future", which continuously satisfy different needs of customer around the world in the steel supply chain area. Professional sales team, providing customers with first-class services; strict purchasing and quality inspection team, carefully selecting high-quality raw materials; advanced scientific and technical team to improve production and reduce costs for customers; excellent design and processing team, carefully crafted and refined; intimate shipping logistics team protecting product transportation.





## State-of-the-art Manufacturing Equipment

Professional CNC Machining Equipment



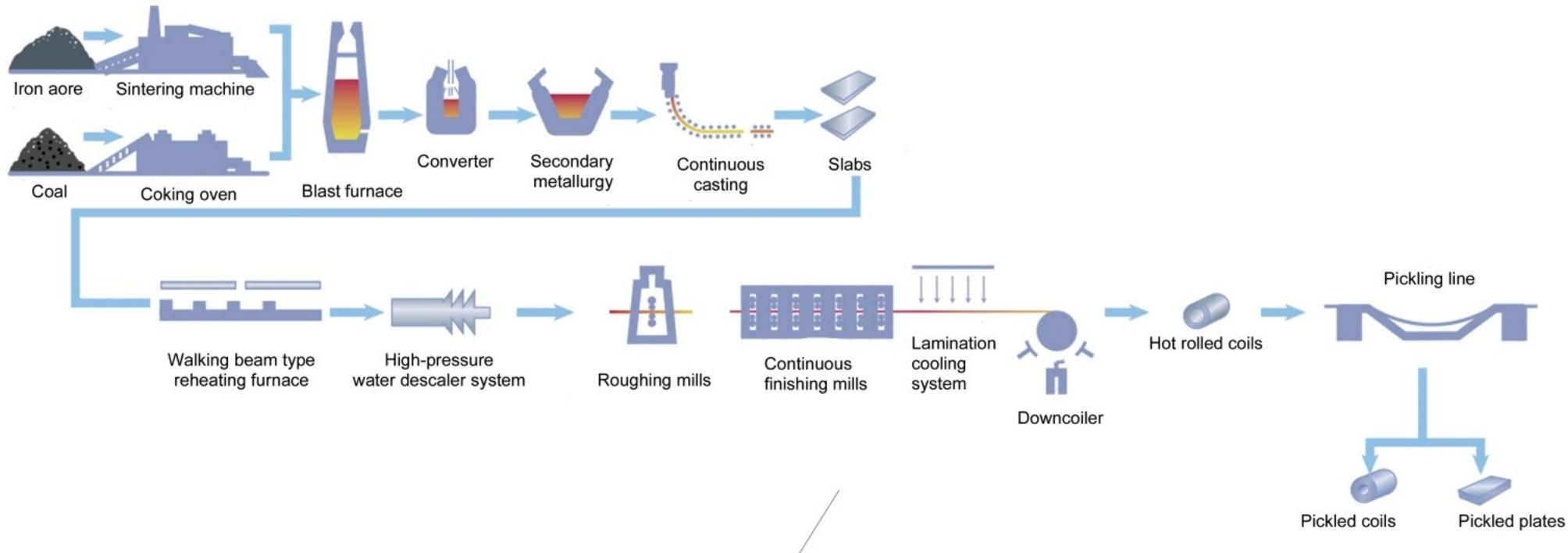






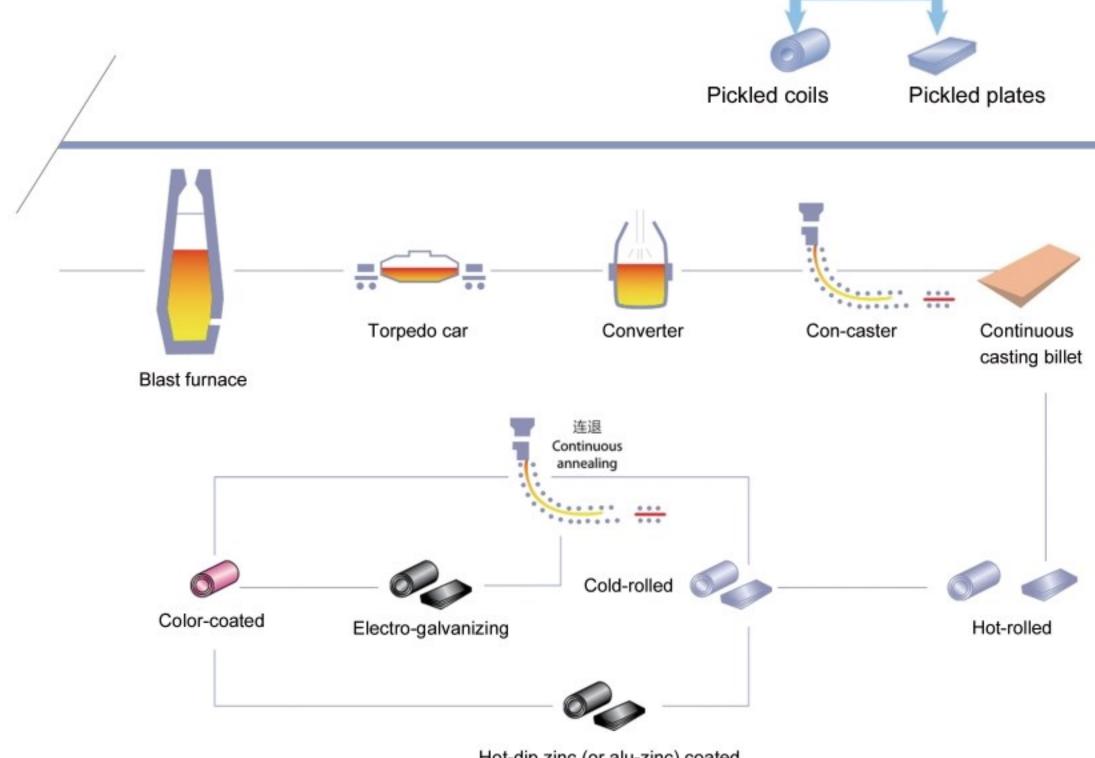






## Production Process

• Due to no heating, there are no pitting and scale defects in hot rolling. The surface quality is good and the surface finish is high. Moreover, the dimension precision of cold rolled products is high, and the properties and structure of products can meet some special requirements, such as electromagnetic properties, deep drawing properties, etc.



Hot-dip zinc (or alu-zinc) coated

# Cold Rolled Products







Cold Rolled Products

## A Short Guide to Cold Rolled Products

- Low carbon and ultra- low carbon steel
- Continuous cold rolled carbon structural steel plates and strips
- Continuous cold rolled high-strength phosphor steel plates and strips
- Continuous cold rolled high-strength bake hardening steel plates and strips
- Continuous cold rolled high-strength dual-phase steel plates and strips
- Continuous cold rolled high-strength low-alloy steel plates and strips



## Reference list of supply standards and steel grades as well as those equivalent or close to them

Standard No.	Q/BQB 403-2003	EN 10130-1999	DIN1623-(1)-1983	GB/T5213-2001	Q/BQB 403-1999 BZJ 407-1999
	DC01 (St12)	DC01	St12	_	St12
	DC03 (St13)	DC03	RRSt13	_	St13
Steel Grades	DC04 (St14, St15)	DC04	St14	SC1	St14, St14F, St14HF, St14ZF, St15
	DC05 (BSC2)	DC05	-	SC2	BSC2
	DC06 (St16, St14-T, BSC3)	DC06	-	SC3	St16, St14-T, BSC3

Standard No.	Q/BQB 403-2003	JIS G 3141-1996	GB/T 5213-2001	GB/T5213-2001
	SPCC	SPCC	_	SPCC
	SPCD	SPCD	<del>-</del>	SPCD
Steel Grades	SPCE	SPCE	SC1	SPCE, SPCEF, SPCEHF, SPCEZF
	SPCEN	SPCEN	SC2	SPCEN

Standard No.	Q/BQB 408-2003	JFS A 2001-1998	GB5213-2001
	BLC	JSC270C	_
	BLD	JSC270D	_
Steel Grades	BUSD	JSC270E	SC1
	BUFD	JSC270F	SC2
	BSUFD	JSC260G	SC3

#### Product sizes

Thickness: 0.12mm-3mm

Width: 600-2050mm or as buyer's requirement.



## Low carbon and ultra-low carbon steel

### Steel name and application

Steel Grade	Application
SPCC	Commercial Purposes (CQ)
SPCD	Drawing (DQ)
SPCE, SPCEN	Deep Drawing (DDQ)

## Chemical composition

Stool Crade		Ch	emical Composit	ion	
Steel Grade	С	Mn	P	S	Alt
SPCC	≤0.12	≤0.50	≤0.035	≤0.025	≥0.020
SPCD	≤0.10	≤0.45	≤0.030	≤0.025	≥0.020
SPCE, SPCEN	≤0.08	≤0.40	≤0.025	≤0.020	≥0.020

### Mechanical and process performances

011-01-	Steel Grade Yield Strength a MPa ≤	Yield Strength a MPa		After Breakage Percent Elongation (L o =50mm, b=25mm) % ≥				
Steel Grade		Mpa ≥	Nominal Thickness mm					
			<0.60	0.60~<1.0	1.0~<1.6	≥1.6		
SPCC	_	270	34	36	37	38		
SPCD	-	270	36	38	39	40		
SPCE SPCEN		270	38	40	41	42		

### Surface quality

Grade	Code No.	Features
Relatively High-grade Finishing Surface	FB (O3)	It is allowed for the existence of a few surface defects which will not affect forming and coating & plating adhesiveness such as minor scratch, impression, pit, roll mark and oxidation tint.
High-grade Finishing Surface	FC (O4)	One side of relatively good quality is free from any remarkable defect visible and the other side must reach FB requirements at least.
Relatively High-grade Finishing Surface	FD (O5)	One side of relatively good quality is free from any defect, namely appearance quality after painting or electrogalvanizing is not affected, and the other side must reach FB requirements at least.



## Steel name and application

Steel Grade	Application
DC01 (St12)	Commercial Purposes (CQ)
DC03 (St13)	Drawing (DQ)
DC04 (St14, St15)	Deep Drawing (DDQ)
DC05 (BSC2)	Extra-deep Drawing (EDDQ)
DC06 (St16,St14-T, BSC3)	Supreme Extra-deep Drawing (SEDDQ)

## Chemical composition

Steel Crede	Chemical Composition							
Steel Grade	С	Mn	Р	s	Alt	Ti		
DC01(St12)	≤0.10	≤0.50	≤0.035	≤0.025	≥0.020	-		
DC03 (St13)	≤0.08	≤0.45	≤0.030	≤0.025	≥0.020	-		
DC04(St14、St15)	≤0.08	≤0.40	≤0.025	≤0.020	≥0.020	-		
DC05(BSC2)	≤0.008	≤0.30	≤0.020	≤0.020	≥0.015	≤0.20		
DC06 (St16, St14-T, BSC3)	≤0.006	≤0.30	≤0.020	≤0.020	≥0.015	≤0.20		

## Mechanical and process performances

Start Condo	Yield	Tensile Strength	Af	ter Breakage Pe (L o =80mm, l	ercent Elongat b=20mm) % ≥	ion	r b. c	n b.c	
Steel Grade	Strength a MPa	Mpa		Nominal Thi	ckness mm		≥	≥	
	""		2	<0.70	0.70~<1.0	1.0~<1.6	≥1.6		
DC01 (St12)	130~260	270	28	30	32	34	=	1,-	
DC03 (St13)	120~240	270	32	34	35	36	-	-	
DC04 (St14, St15)	120~210	270	36	38	39	40	1.5	0.18	
DC05 (BSC2)	110~190	260	38	39	40	41	1.8	0.20	
DC06 (St16, St14-T, BSC3)	100~180	250	39	40	41	42	2.0	0.22	

## Surface quality

Grade	Code No.	Features
Relatively High-grade Finishing Surface	FB (O3)	It is allowed for the existence of a few surface defects which will not affect forming and coating & plating adhesiveness such as minor scratch, impression, pit, roll mark and oxidation tint.
High-grade Finishing Surface	FC (O4)	One side of relatively good quality is free from any remarkable defect visible and the other side must reach FB requirements at least.
Relatively High-grade Finishing Surface	FD (O5)	One side of relatively good quality is free from any defect, namely appearance quality after painting or electrogalvanizing is not affected, and the other side must reach FB requirements at least.



## Stamping steel

## Steel name and application

Steel Grade	Application
BLC	Commercial Purposes (CQ)
BLD	Drawing (DQ)
BUSD	Deep Drawing (DDQ)
BUFD	Extra-deep Drawing (EDDQ)
BSUFD	Supreme Extra-deep Drawing (SEDDQ)

## Chemical composition

Steel Grade		Chemical Composition					
Steel Grade	С	Mn	Р	S	Alt	Ti	
BLC	≤0.10	≤0.50	≤0.035	≤0.025	≥0.020	_	
BLD	≤0.08	≤0.45	≤0.030	≤0.025	≥0.020	-	
BUSD	≤0.010	≤0.40	≤0.025	≤0.020	≥0.015	≤0.20	
BUFD	≤0.008	≤0.30	≤0.020	≤0.020	≥0.015	≤0.20	
BSUFD	≤0.006	≤0.30	≤0.020	≤0.020	≥0.015	≤0.20	

## Mechanical and process performances

Yield Steel Grade Strength a		Strength		After Breakage Percent Elongation (L o =80mm, b=20mm) % ≥			r b. c	n b. c
Steel Glade	MPa	VIO:	Nominal Thickness mm			≥	2	
			<0.70	0.70~<1.0	1.0~<1.6	≥1.6		
BLC	140~270	270	36	38	40	42	-	-
BLD	120~240	270	38	40	42	44	1.4	0.18
BUSD	120~210	260	40	42	44	46	1.6	0.20
BUFD	120~190	250	42	44	46	48	1.8	0.21
BSUFD	110~180	250	44	46	48	50	2.0	0.22

## Surface quality

Grade	Code No.	Features
Relatively High-grade Finishing Surface	FB (O3)	It is allowed for the existence of a few surface defects which will not affect forming and coating & plating adhesiveness such as minor scratch, impression, pit, roll mark and oxidation tint.
High-grade Finishing Surface	FC (O4)	One side of relatively good quality is free from any remarkable defect visible and the other side must reach FB requirements at least.
Relatively High-grade Finishing Surface	FD (O5)	One side of relatively good quality is free from any defect, namely appearance quality after painting or electrogalvanizing is not affected, and the other side must reach FB requirements at least.



## Cold Rolled Products

Perfect quality relies on advanced manufacturing technology.

















Scale manufacturing casts enterprise strength and brand



# Galvanized Products







Galvanized Products

## A Short Guide to Galvanized Products

- Hot-dip Galvanized
- Electrogalvanizing
- Aluminum zinc plating





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## **Hot-dip Galvanized Products**

Galvanized steel plate is to prevent corrosion on the surface of steel plate and prolong its service life. A layer of metal zinc is coated on the surface of steel plate, which is called galvanized steel plate

Hot dip galvanized steel plate. A thin steel sheet with a layer of zinc adhered to its surface by immersing it in a molten zinc bath. At present, continuous galvanizing process is mainly used, that is, the rolled steel plate is continuously immersed in the bath with zinc melting to make galvanized steel plate.

#### Applications and features are given as following table

Grade	Application	Features
DC51D+Z (St01Z, St02Z, St03Z) , DC51D+ZF	Commercial purpose	Low carbon and/or ultra-low carbon
DC52D+Z (St04Z), DC52D+ZF	Drawing	steel
DC53D+Z (St05Z), DC53D+ZF	Deep drawing	
DC54D+Z (St06Z), DC54D+ZF	Futur dans describe	
DD54D+Z (St06ZR)	Extra deep drawing	Ultra-low carbon steel
DC56D+Z (St07Z), DC56D+ZF	Supreme extra deep drawing	
S220GD+Z, S220GD+ZF, S250GD+Z, S250GD+ZF, S280GD+Z (StE280-2Z), S280GD+ZF, S320GD+Z, S320GD+ZF, S350GD+Z (StE345-2Z), S350GD+ZF, S550GD+Z, S550GD+ZF	Structure	Carbon steel or low-alloy steel
H220PD+Z, H220PD+ZF		High-strength phosphor steel
H260PD+Z, H260PD+ZF		riigii-su erigur priosprior steel
H300LAD+Z, H300LAD+ZF, H340LAD+Z (HSA340Z), H340LAD+ZF, H380LAD+Z, H420LAD+Z (HSA410Z)	Cold forming	High-strength low-alloy steel
H180YD+Z, H180YD+ZF, H220YD+Z, H220YD+ZF, H260YD+Z, H260YD+ZF		High-strength ultra-low carbon stee
H180BD+Z, H180BD+ZF, H220BD+Z, H220BD+ZF, H260BD+Z, H260BD+ZF		High-strength bake hardening steel

#### Product sizes

Nominal thickness: 0.30mm~3.0mm, nominal width: 800mm~1830mm

Note: nominal thickness of a plate/strip is sum of base plate thickness and coating thickness.

#### Surface structure

Surface Structure	Code No.	Features	Application	
Conventional spangle	z	Spangles condensated on zinc coating under normal conditions after galvanizing.	Commercial purposes	
Small spangle	x	Surface in spangles smaller than conventional ones and due to controlled condensation of zinc coating.	Applications where conventional spangles cannot meet the surface appearance	
Skin passed spangle	G	Surface structure after special skin pass treatment.	Applications of high surface quality requirements,	
Skin passed small spangle	GX		such as color coating base plates.	
Zero spangle	N	No visible spangles on coating surface as a result of a special production process.		
Zn-Fe alloy	R	No spangle, gray, normally matte	Applicable to further painting	

#### Surface treatment

- Chromate treatment (L): Chromate treatment is a chemical treatment with an aim to prevent white rusts formed on product surfaces during transportation and storage.
- Oiling (Y): Oiling is to prevent white rusts formed on product surfaces during transportation and storage.
- 3. Chromate treatment + oiling (LY): This treatment with oiling after surface chromate treatment is to further avoid the forming of white rusts.

#### Surface quality

Code No.	Features
FB (O3)	Spangles condensated on zinc coating under normal conditionsafter galvanizing.
FC (O4)	No erosion spot is allowed. However, it is allowed for the existence of light impression, scratches, zinc flow ripple marks, minor chromate treatment defects in small range, while the other side must reach FB requirements at least.
FD (O5)	One side of relatively good quality must further restrict on defects, namely appearance quality after painting is not affected, and the other side must reach FB requirements at least.





## **Electro-galvanized Products**

Electro galvanizing, also known as cold galvanizing in the industry, is the process of forming uniform, dense and well bonded metal or alloy deposition layer on the surface of products by electrolysis.

Electroplated galvanized steel sheet, produced by electroplating method, has good processability. However, the coating is thinner and its corrosion resistance is not as good as that of hot dip galvanized sheet;

Because zinc is not easy to change in dry air, and it can produce a kind of basic zinc carbonate film in humid environment. This kind of film can protect the internal parts from corrosion damage. Even if the zinc layer is damaged by some factors, the combination of zinc and steel will form a micro battery after a period of time, and the steel matrix will be protected as a cathode.

#### Characteristics of SECC

- Good corrosion resistance, fine and uniform combination, not easy to be corrosive gas or liquid into the interior.
- 2. Because the zinc layer is relatively pure, it is not easy to be corroded in acid or alkali environment. Effective protection of steel body for a long time.

#### Reference list of electrogalvanized plate grades and base plate grades

Steel Grade	Application	Base Plate Grade	Corresponding Base Plate Standards
SECC, SECD, SECE		SPCC、SPCD、SPCE	Q/BQB 402-2003
SECIF		DC05 (BSC2)	Q/BQB 403-2003
BLCE+Z		BLC	
BLDE+Z	Drawing	BLD	
BUSDE+Z		BUSD	Q/BQB 408-2003
BUFDE+Z		BUFD	
BSUFDE+Z		BSUFD	
B170P1E+Z		B170P1	
B210P1E+Z		B210P1	
B250P1E+Z		B250P1	
B180P2E+Z		B180P2 (BP340)	O/POP 416 2002
B220P2E+Z		B220P2 (BP380)	Q/BQB 416-2003
B140H1E+Z	Cold forming	B140H1	
B180H1E+Z		B180H1	
B180H2E+Z		B180H2 (BH340)	
B340/590DPE+Z		B340/590DP	Q/BQB 418-2003
B400/780DPE+Z		B400/780DP	G/DQD 4 10-2003
B340LAE+Z		B340LA	Q/BQB 419-2003
B410LAE+Z		B410LA	

#### Product sizes

Nominal thickness: 0.13mm-5.0mm

Nominal width: 600mm-1500mm,762mm,914mm,1000mm,1200mm,1219mm,1250mm Note: nominal thickness of a plate/strip is sum of base plate thickness and coating thickness.



#### Surface treatment

- 1. Chromate treatment (C): This surface treatment can reduce white rusts formed on product surfaces during transportation and storage.
- 2. Chromate treatment + oiling (S): This surface treatment can further reduce white rusts formed on product surfaces.
- 3. Phosphate treatment(with seal treatment) (P): This surface treatment serves as preparation for further surface painting and has some lubrication function. Also, itcan reduce white rusts formed on product surfaces.
- 4. Phosphate treatment (with seal treatment) + oiling (O): This surface treatment can reduce white rusts formed on product surfaces and improve formability of steel plates.
- 5. Phosphate treatment (without seal treatment) (T): This surface treatment can reduce white rusts formed on product surfaces.
- 6. Phosphate treatment (without seal treatment) + oiling (V): This surface treatment can reduce white rusts formed on product surfaces and improve formability of steel plates.
- 7. Oiling (O): This surface treatment can reduce white rusts formed on product surfaces. However, it normally does not used as rolling oil and drawing lubrication oil for post processing.
- 8. No treatment (M): No treatment tends to the forming of white rusts on steel plate and strip surface. If the user requires such method,

#### Surface quality

Code No.	Features
FB (O3)	No defects such as holiday, coating stripping and cracks are allowed. However, it is allowed for the existence of minor defects which will not affect forming and coating adhesiveness such as minor scratch, small roll
FC (O4)	One side of relatively good quality must further restrict on defects such as light scratch and roll mark and the other side must reach FB requirements at least.
FD (O5)	One side of relatively good quality must further restrict on defects, namely appearance quality after painting is not affected, and the other side must reach FB requirements at least.

## Reference list of supply standards and steel grades as well as those equivalent or close to them

Q/BQB 430-2003	JIS G3313-1998	GB/T17675-1995	ASTM A591-98
SECC	SECC	DX1	cs
SECD	SECD	DX2	DS
SECE	SECE	DX3	DDS
SECIF	_	_	EDDS

Q/BQB 430-2003	EN 10152-1993
BLCE+Z	DC01+ZE
BLDE+Z	DC03+ZE
BUSDE+Z	DC04+ZE
BUFDE+Z	DC05+ZE
BSUFDE+Z	DC06+ZE

Q/BQB 430-2003	EN 10152-1993
B170P1E+Z	JEC370P
B210P1E+Z	JEC390P
B250P1E+Z	JEC440P
B180P2E+Z	JEC340W
B220P2E+Z	JEC390W
B140H1E+Z	_
B180H1E+Z	
B180H2E+Z	_
B340/590DPE+Z	<del>-</del>
B400/780DPE+Z	_
B340LAE+Z	-
B410LAE+Z	JEC590R





## **Aluminum-zinc plating**

Aluminum-zinc plating steel plate has many excellent characteristics: strong corrosion resistance, 3 times of pure galvanized sheet; beautiful zinc flower on the surface, which can be used as building exterior board.

Aluminum-zinc alloy steel plate has good heat resistance, can withstand high temperature of more than 300 degrees Celsius, similar to the high temperature oxidation resistance of aluminum plated steel plate, it is often used in chimney tube, oven, illuminator and fluorescent lamp shade.

The thermal reflectance of Al Zn steel sheet is very high, which is twice as high as that of galvanized steel sheet.

	Grade	Mechanic Properties				
Usage		Yield Strength (MPA)	Tensile Strength (MPA)	Elongation	Purposes and Features	
Punching Galvanized steel	DX51D+Z(ZF)	_	270-500	≥20	Including general ues, mechanical b	
	DX52D+Z(ZF)	140-300	270-420	≥22	month with, deep drawing, super deep	
	DX53D+Z(ZF)	140-260	270-380	≥26	drawing with material. The coating properties and welding peoperties of the	
	DX54D+Z(ZF)	140-220	270-350	≥30	alloy are better.	
Structure Galvanized steel	S220GD+Z(ZF)	≥220	≥300	≥18		
	S250GD+Z(ZF)	≥250	≥330	≥17		
	S280GD+Z(ZF)	≥280	≥360	≥16		
	S320GD+Z(ZF)	≥320	≥390	≥15	Can be uesd for structural purposes,	
	S350GD+Z(ZF)	≥350	≥420	≥14	corrosion resistance and ggod process performance.	
	S400GD+Z(ZF)	≥400	≥470	-		
	S500GD+Z(ZF)	≥500	≥530	-		
	S550GD+Z(ZF)	≥550	≥560	_		

#### **Product sizes**

Nominal thickness: 0.14mm-4mm, nominal width: 600mm-1250mm or as buyer requirement Zinc Coating:30-275g/m²

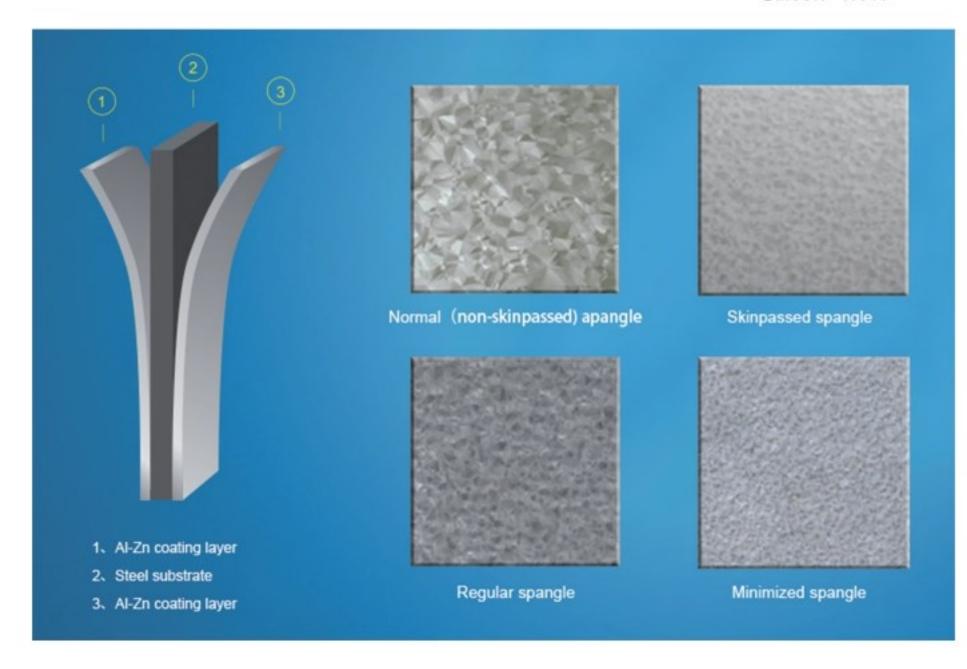
Aluminum-zinc plating steel is comprised of 55% aluminum, 43.4% zinc, and 1.6% silicon solidified ender 600°C 's temperature.

The product has great properties of heat resistance and heat reflection is double higer than galvanized sheet, so it is excellent heat insulator.

#### Aluminum-zinc plating steel plate (content)

Aluminum 55% Zinc 43.4%

Silicon 1.6%





## Galvanized Products

Perfect quality relies on advanced manufacturing technology.

















Scale manufacturing casts enterprise strength and brand

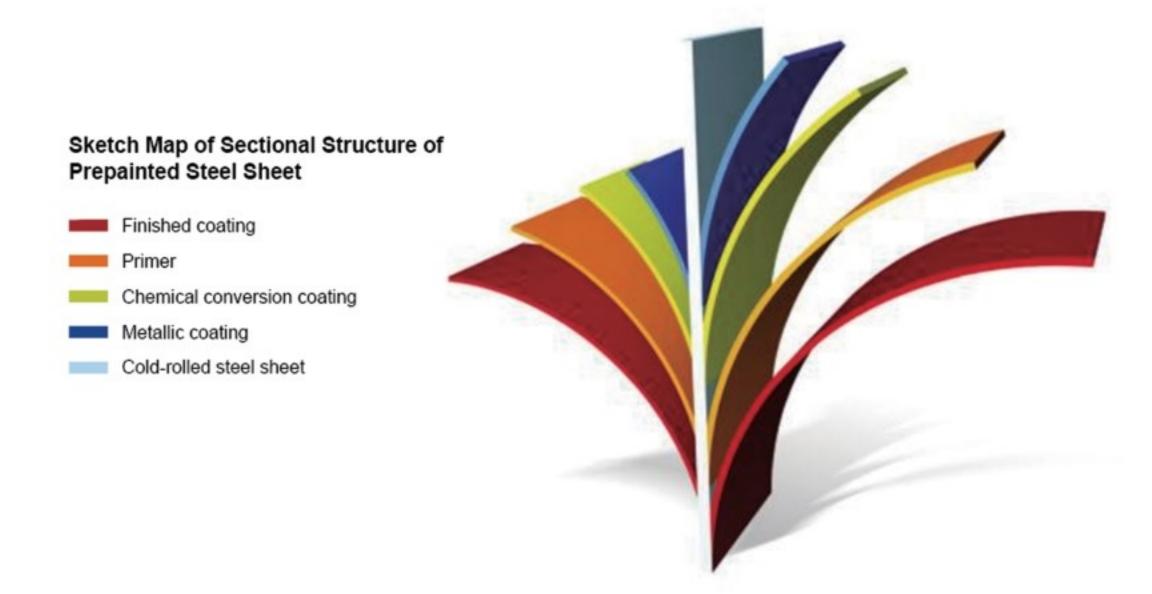


## Prepainted Products

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## A Short Guide to Prepainted Products

- Prepainted Galvanized Steel / Coil(PPGI)
- Prepainted Galvalume Steel /coil (PPGL)
- Galvanized Corrugated Roofing Sheet





## PPGI/PPGL

PPGI also known as prepainted galvanized steel coil and color coated steel coil, with a hot dip zinc coated steel sheet substrate.

PPGL also known as prepainted galvalume steel coil, with a galvalume steel sheet as a substrate.

#### Type and usage of prepainted steel sheet

Type of Base Metal	Steel Grade	Grade of base metal	Application
	TDC51D+Z	DC51D+Z	Normal use
	TDC52D+Z	DC52D+Z	For drawing
	TDC53D+Z	DC53D+Z	For deep drawing
	TS220GD+Z	S220GD+Z	Structure
Hot-dip zinc coated	TS250GD+Z	S250GD+Z	Structure
	TS280GD+Z	S280GD+Z	Structure
	TS320GD+Z	S320GD+Z	Structure
	TS350GD+Z	S350GD+Z	Structure
	TS550GD+Z	S550GD+Z	For high-strength structure
	TDC51D+AZ	DC51D+AZ	Normal use
	TS250GD+AZ	S250GD+AZ	Structure
lak dia aha aina allam asaka d	TS300GD+AZ	S300GD+AZ	Structure
lot-dip alu-zinc alloy coated	TS350GD+AZ	S350GD+AZ	Structure
	TS450GD+AZ	S450GD+AZ	Structure
	TS550GD+AZ	S550GD+AZ	For high-strength structure
	TSECC	SECC	Normal use
Electro-galvanized	TSECD	SECD	For drawing
	TSECE	SECE	For deep drawing

#### **Product sizes**

Thickness: PPGI: 0.13-0.8 mm, PPGL: 0.13-3.5 mm.

Width: 600-1250 mm

## Reference list of supply standards and steel grades as well as those equivalent or close to them

Q/BQB 440-2003	JISG 3312-1994
TDC51D (TSt01、TSt02、TSt03)	CGCC
TDC52D	CGCD1
TDC53D	_
TS280GD (TStE28)	CGC400
TS350GD (TStE34)	CGC440
TS550GD	CGC570
TSECC, TBLCE	222
TSECD, TBLDE	_
TSECE, TBUSDE	<del>-</del>

#### Composition and function of coatings

**Resin:** Resin, namely the membrane forming matter, is the principal component and base of coating, also called base material, and the vital factor determining the property of the membrane. It is required that, being a membrane forming matter, resin should be very stable without any obvious physical change or chemical change in the storage period of coating.

**Pigment:** Pigment must match resin in coating, which mainly colors the membrane. Different proportion of pigment of the coating membrane has different rigidity, glossiness, and corrosion resistance, etc.

**Solvent:** The solvent is an important component of liquid coating, which is volatile while baking the coating.

Additives: The accessory ingredient is a small amount of additive for improving the performance of coating.

#### Category and film thickness of primers

Epoxy primer, Polyester primer, Water-soluble acrylic acid primer, Water-soluble acrylic acid primer.

In general, the primer is chosen in accordance with the usage, environment condition, processing stage and finish coat. The film thickness of the primer is usually 5-7 um.

#### Category of finish coats

Polyester、Silicon modified polyesters、High-durability polyester、Polyvinylidene fluoride

Among all the ingredients of coil coatings, resin and pigment have the function of duration, and the primers commonly used consist of polyester, silicon modified polyester, polyvinylidene fluoride, high durability polyurethane, etc.





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## **Galvanized Corrugated Roofing Sheet**

- High Strength Base Steel
- Special Pre-treatment for longer life and paint coating
- Light Weight Coating Galvalume 55% Aluminium Zinc Alloy
- Option of Various Colours / Finishes
- Highly effective in withstanding extreme weather conditions

The product is made of high tensile / strength steel, which after special pre-treatment is coated with Zinc (100%) which has sacrificial properties. After this the product is coated on both the surfaces by primer and paint for superior finish and long life. Various types of paint coating are used under to suit varied industrial requirement .

Raw Material	GL、GI or PPGI			
Surface	Chromated/ Oiled/ Dry			
Spangle	Regular/ minimized/ Big Spangle			
Corlor	RAL Color or as per customer's request			
Paint Coating Thickness Range	Front Coating: primer+topcoat: 10um to 40um; Back/Bottom Coating: 3um to 10um.			

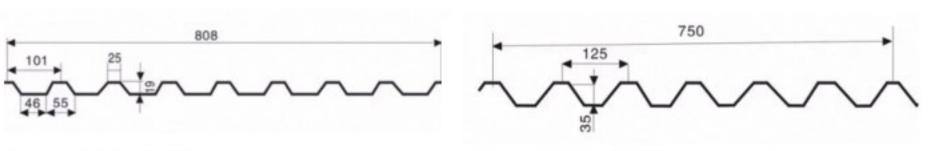
#### **Product sizes**

Thickness: 0.15mm-2.0mm. Width: 600mm-1575mm.



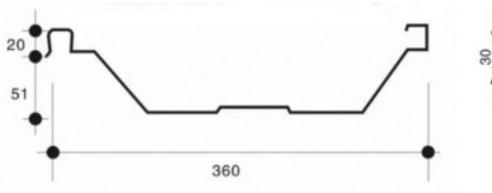
#### Model

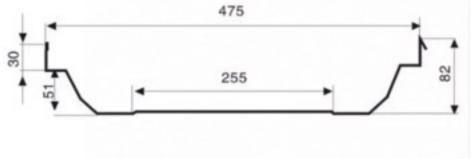
The following is for reference only. Due to limited space, not all of them are listed.



Cover Width: 1000mm

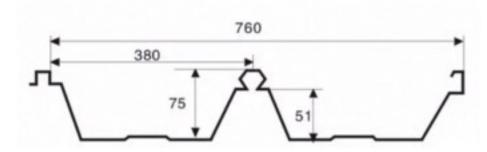


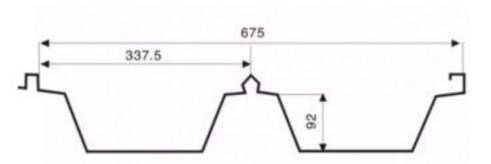




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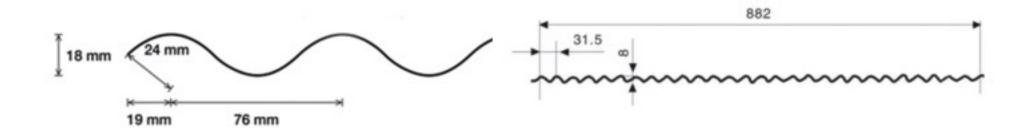






Cover Width: 1000mm

Cover Width: 1000mm



Cover Width: 1000mm

Cover Width: 1000mm



## Color Reference Map

Color reference is based on lauer color and RAL. The following colors are for reference only. Due to limited space, not all of them are listed.

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

## **Printing Products**

## **Wood Pattern**









## Rock Pattern



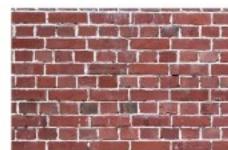






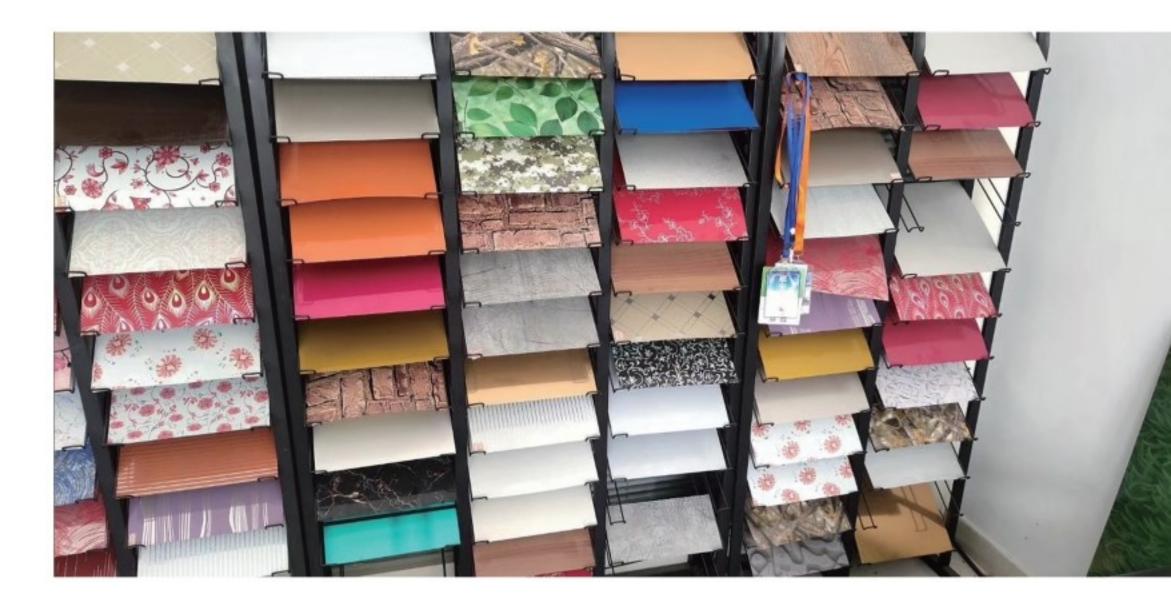
Rock Pattern













## Prepainted Products

Perfect quality relies on advanced manufacturing technology.















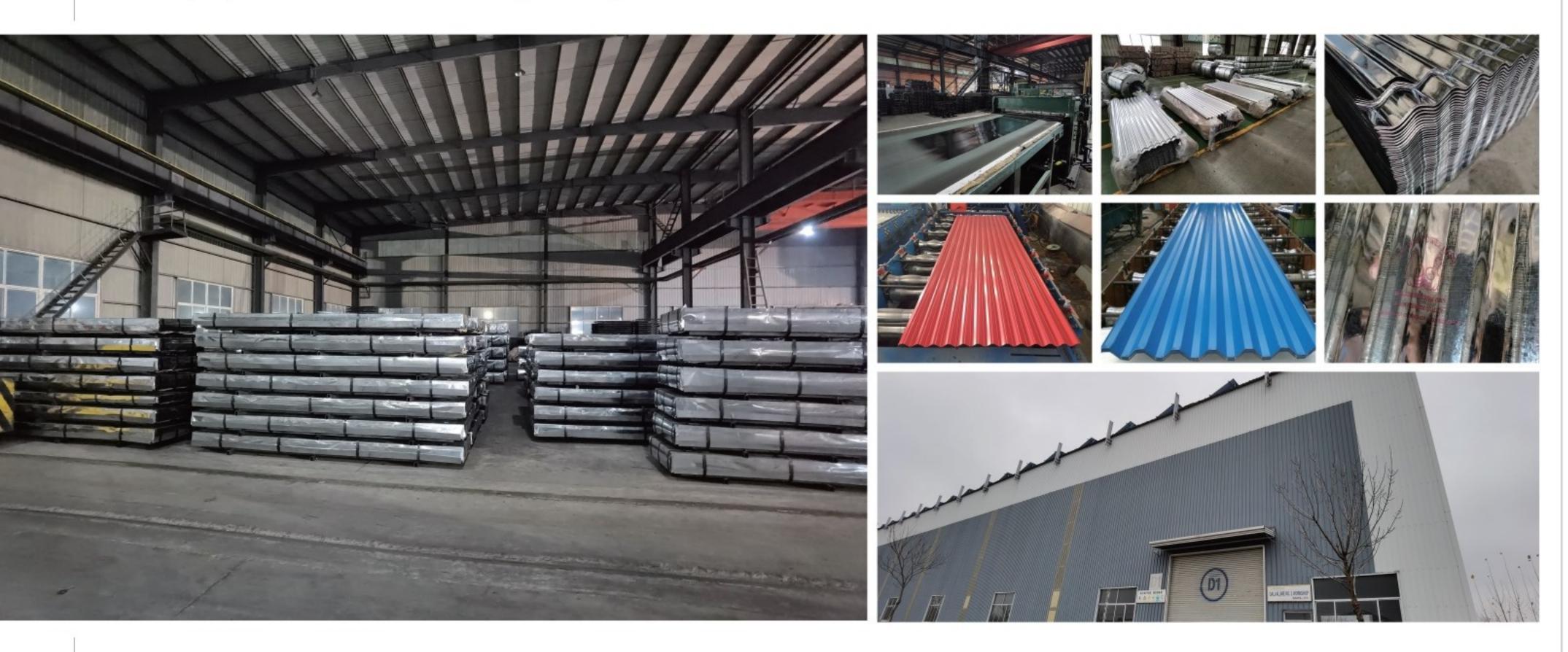


Scale manufacturing casts enterprise strength and brand



## Galvanized Corrugated Roofing Sheet

Perfect quality relies on advanced manufacturing technology.



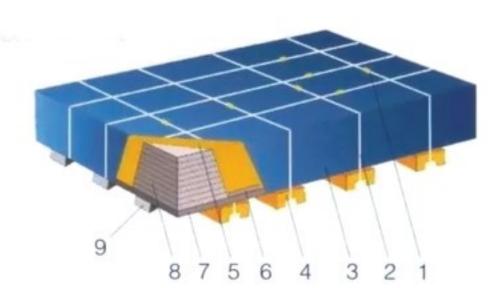
Scale manufacturing casts enterprise strength and brand

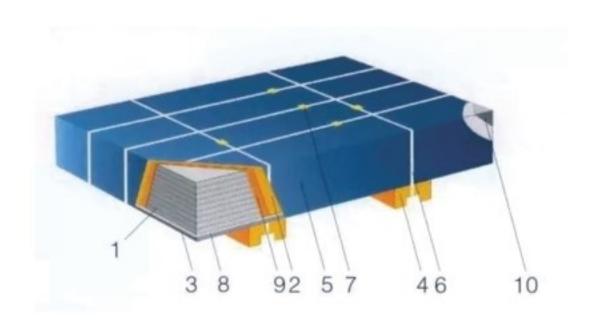


## Package for products

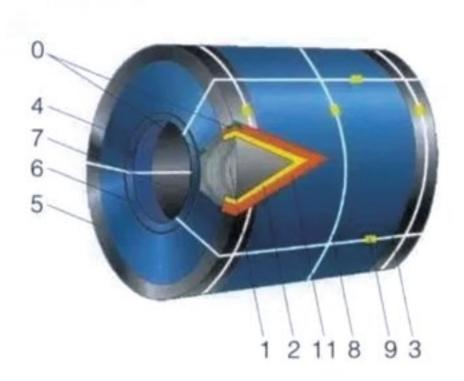




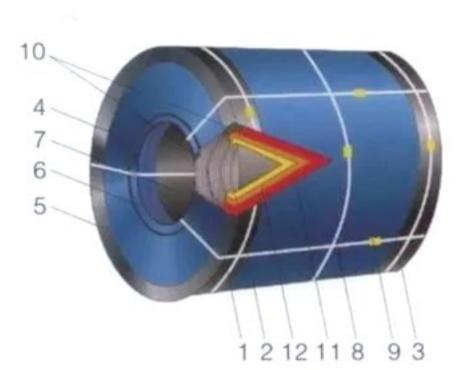




- 1、Lock catch
- 2 Strapping
- 3. Peripher rapper sheet
- 4、Wooden pallet
- 5. Anti-rust paper
- 6. Corner armor
- 7、Metal gasket
- 8 Steel
- 9. Square tube
- ▶ 1、Steel
- 2 Diaphragm
- 3、Wooden pallet
- 4. Metal gasket
- 5. Periphery
- ▶ 6、Wrapper sheet
- 7. Lock catch
- 8. Corrugated paper
- 9. Anti-rust paper
- ▶ 10. Corner armor



- ▶ 1、Steel coil
- 2. Anti-rust paper
- 3. Outer steel panel
- 4 Round lid
- 5. Outer galvanized retainer
- 6. Inner galvanized retainer
- 7. Inner Steel Panel
- 8、Strapping
- 9. Lock catch
- 10. Outer, inner paper edgeboard
- ▶ 11、Plastic cannula



- 1. Steel coil
- 2、Anti-rust paper
- 3. Outer steel panel
- 4 Round lid
- Outer galvanized retainer
- 6. Inner galvanized retainer
- 7. Inner Steel Panel
- 8、Strapping
- 9 Lock catch
- 10. Outer, inner paper edgeboard
- 11. Outer steel panel
- ▶ 12、Plastic cannula