



## Galvanized steel sheets

Galvanized steel sheet, also called zinc coated steel sheet, owns many merits like strong coating adhesiveness, high erosion-resistance, accurately controlled zinc coating thickness, high size precision, flat profile and good mechanical, processing and welding performance. Therefore, the galvanized steel sheet is not best sale in the international market but favored by the customers. Category of Hot-dip galvanized products: commercial purpose, drawing, deep drawing, extra deep drawing, supreme extra deep drawing, structure, and cold forming.

The products of these lines are widely used in electrical household appliance, architecture, transportation, furniture, auto parts etc.



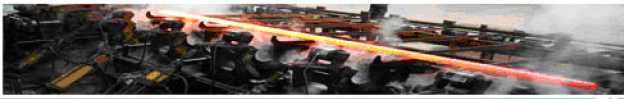
### 1. Applications and features are given as following table

Steel Grade	Application	Feature
DC51D+Z (St01Z, St02Z, St03Z) , DC51D+ZF	Commercial purpose	Low carbon and/or ultra-low carbon steel
DC52D+Z (St04Z), DC52D+ZF	Drawing	
DC53D+Z (St05Z), DC53D+ZF	Deep drawing	Ultra-low carbon steel
DC54D+Z (St06Z), DC54D+ZF DD54D+Z (St06ZR)	Extra deep drawing	
DC56D+Z (St07Z), DC56D+ZF	Supreme extra deep drawing	

**2. Available 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.

### 3. Chemical Composition %:

base metal type	Grade	CHEMICAL COMPOSITION %			
		C	Si	Mn	P
cold rolled steel sheet	DC51D+Z (St01Z, St02Z, St03Z) , DC51D+ZF	≤0.10	-	≤0.50	≤0.035
	DC52D+Z (St04Z), DC52D+ZF	≤0.08	-	≤0.45	≤0.030
	DC53D+Z (St05Z), DC53D+ZF	≤0.08	-	≤0.40	≤0.030
	DC54D+Z (St06Z), DC54D+ZF	≤0.01	≤0.10	≤0.30	≤0.025



	DC56D+Z (St07Z), DC56D+ZF	≤0.01	≤0.10	≤0.30	≤0.025
hot rolled steel sheet	DD51D+Z (St01ZR, St02ZR)	≤0.10	-	≤0.50	≤0.035
	DD54D+Z (St06ZR)	≤0.01	≤0.10	≤0.30	≤0.025

#### 4. Mechanical performances and coating adhesiveness

Grade	Mechanical performances				Coating Adhesiveness		
	Yield Strength MP	Tensile Strength MP ≥	After Breakage Percent Elongation (LO=80mm,b=20mm)%		Bending Center Diameter in Following Coating Weight (g/m <sup>2</sup> )c (a=plate thickness)		
			L0=80mm,b=20mm				
			Under following nominal thickness mm		≤140/140	>140/140~175/175	>175/175
≤0.7			>0.7				
DC51D+Z (St01Z, St02Z, St03Z), DC51D+ZF	-	270~500	20	22	0a	1a	2a
DC52D+Z (St04Z), DC52D+ZF	140~300	270~420	24	26			
DC53D+Z (St05Z), DC53D+ZF	140~260	270~380	28	30			
DC54D+Z (St06Z)	140~220	270~350	34	36			
DC54D+ZF			32	34			
DC56D+Z (St07Z)	120~180	270~350	38	40			
DC56D+ZF			36	38			

#### 5. Coating weight range

coating form	Applicable Surface Structure	Weight Range of Following Coatings a g/m <sup>2</sup> (A/B)	
		Zinc Coating	Zn-Fe Alloy Coati
equally coating	Z,X,G,GX,N,R	40/40~225/225	30/30~90/90
differential coating	N,R	30~150 (each side)	-

a. 50 g/m<sup>2</sup>coating weight is equivalent to about 7.1μm. b. max. differential coating thickness ratio is 1:3.

#### 6. Surface structure



Surface structure	Code No.	Features	Application
Conventional spangle	Z	Spangles condensed 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 requirements.
Skin passed spangle	G	Surface structure after special skin pass treatment.	Applications of high surface quality requirements, such as color coating base plates.
Skin passed small spangle	GX		
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

### 7. Surface treatment

<b>1 Chromate treatment (L)</b>	Chromate treatment is a chemical treatment with an aim to prevent white rusts formed on product surfaces during transportation and storage.
<b>2 Oiling (Y)</b>	Oiling is to prevent white rusts formed on product surfaces during transportation and storage.
<b>3 Chromate treatment+ Oiling (LY)</b>	3 Chromate treatment+ Oiling (LY) This treatment with oiling after surface chromate treatment is to further avoid the forming of white rusts.

### 8. Surface quality

Code No.	Features
<b>FB (O3)</b>	It is allowed for the existence of small erosion spots, dark spots, strip marks, minor chromate treatment defects and small zinc particles.
<b>FC (O4)</b>	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.
<b>FD (O5)</b>	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.

### 9. Steel grade reference list of the standards, the cited standards and other standards

<b>Q/BQB 420-2003</b>	<b>EN10142:2000</b>	<b>EN 10142:1990</b>	<b>JISG3302-1994</b>	<b>ASTMA653M-2002</b>
	<b>EN10147:2000</b>	<b>EN 10147:1991</b>		



	EN10292:2000			
DC51D+Z (St01Z, St02Z, St03Z), DC51D+ZF	DC51D+Z, +ZF	FeP02GZ, ZF	SGCC	CS type C
DC52D+Z (St04Z), DC52D+ZF	DC52D+Z, +ZF	FeP03GZ, ZF	SGCC	CS type A, type B
DC53D+Z (St05Z), DC53D+ZF	DC53D+Z, +ZF	FeP05GZ, ZF	SGCD1	FS type A, type B
DC54D+Z (St06Z), DC54D+ZF	DC54D+Z, +ZF	FeP06GZ, ZF	SGCD2	DDS
DC56D+Z (St07Z), DC56D+ZF	DC56D+Z, +ZF	DX56D+Z, +ZF (SEW 021)	SGCD3	EDDS

