

## Electro-galvanized Steel (EG)

is zinc-coated steel produced through the electroplating process, resulting in a smooth, gray surface with superior corrosion and rust resistance compared to regular steel sheet. It is suitable for applications that require painting, non-painting, or surface coating, such as furniture, electrical appliances, and automotive/motorcycle parts.

### General Features of Electro-galvanized Steel (EG)

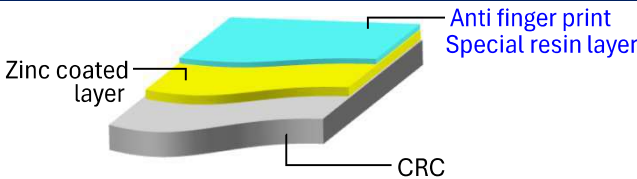
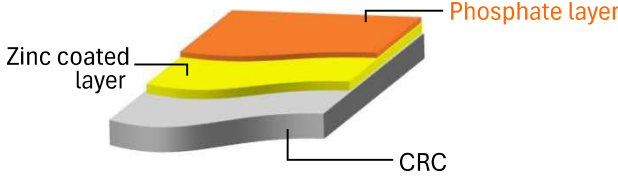
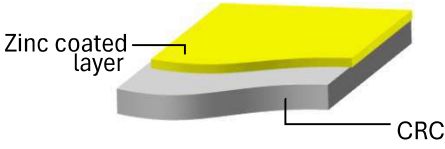
- High corrosion resistance
- Excellent for bending, folding, and stamping
- Smooth surface, suitable for applications requiring visible finish and aesthetics
- Surface well-suited for painting, ensuring strong and uniform adhesion



### Types / Product Features of Electro-galvanized Steel (EG)

TCRSS offers zinc-coated products (TZ), classified into three types based on chemical processes to suit diverse customer applications. They are chromate-free and environmentally friendly (zinc coating complies with TIS 2223 standards).

<Type of Products>

Chemical treatment	Coating layer	Features
<b>VN</b>		<ul style="list-style-type: none"> <li>• Chromate-free</li> <li>• An additional coating layer with a special resin helps prevent fingerprints and corrosion.</li> </ul>
<b>PV / PY</b>		<ul style="list-style-type: none"> <li>• Chromate-free</li> <li>• Additional phosphate coating – Suitable for painting applications and general use.</li> </ul>
<b>MM</b>		<ul style="list-style-type: none"> <li>• Coated with pure zinc – Suitable for basic products and general applications</li> </ul>


<Quality Properties>

	Quality Properties				
	Corrosion Resistance	Electrical Conductivity	Fingerprint Resistance	Smoothness	Paintability
<b>VN</b>	●	◎	◎	◎	○
<b>PV/PY</b>	△	◎	-	-	◎
<b>MM</b>	-	◎	-	-	-

● : Excellent ◎ : Very Good ○ : Good △ : Fair

## Application / การนำไปใช้งาน


**Electrical appliance**



EG is commonly used to manufacture components of electrical appliances that require a smooth surface and high durability, such as refrigerator structures, air conditioners, washing machine bodies, and microwave ovens.

**Chemical treatment**  
 VN  PV/PY  MM


**Office Equipment / Furniture**



EG is used for office equipment structures such as copiers, shelving, and furniture, where a smooth surface, easy paintability, good formability, and sufficient corrosion protection are required for indoor office applications.

**Chemical treatment**  
 VN  PV/PY  MM


**Build materials**



EG can be bent, folded, or formed into steel angles for light structural work and frames, which are easy to weld and assemble. It is also used to produce switchboard components, where a uniform smooth surface and good paintability are required.

**Chemical treatment**  
 VN  PV/PY  MM

**Automobiles**



EG is used to manufacture automotive components such as oil filters and motorcycle fuel tanks, which require a uniform surface, excellent formability, reduced risk of cracking, strong corrosion resistance, high strength, and easy

**Chemical treatment**  
 VN  PV/PY  MM



## Specification

### ● Product Grades

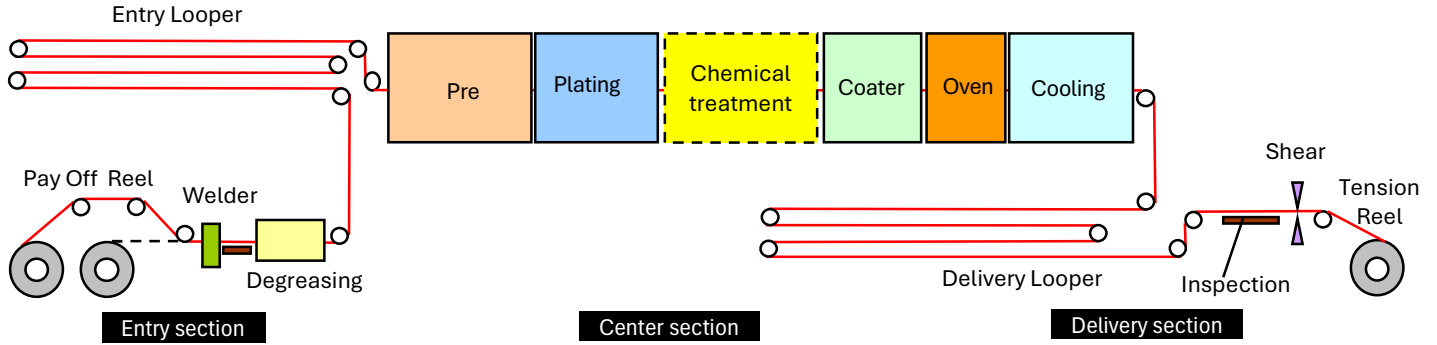
Base Metal	Classification/ Temper grade	Base Metal Grade	Standard	
			TIS 2223	JIS G 3313
Cold Rolled Steel Sheet (General)	Commercial	SPCC	SECC	SECC
	Drawing	SPCD	SECD	SECD
	Deep drawing	SPCE	SECE	SECE
	Deep drawing, Non-aging	SPCF	SECF	SECF
	1/8 Hard	SPCC-8	SECC-8	SECC-8
Hot Rolled Steel Sheet	Commercial	SPHC	SEHC	SEHC
	Commercial use (High strength)	SS400	SE400	SE400
		SS490	SE490	SE490
		SS540	SE540	SE540

### ● Mass of Zinc Coating

Symbol for Zinc on one side	Minimum * g/m <sup>2</sup>	(Reference) Standard	
		g/m <sup>2</sup>	μm
ES	-	-	-
EB	2.5	3	0.4
E8	8.5	10	1.4
E16	17.0	20	2.8
E24	25.5	30	4.2
E32	34.0	40	5.6

\*Complies with TIS 2223 standard (one-side coating)

# Manufacturing process



Section	Function
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## Entry section

### Feed CRC into the center section continuously.

- **Pay off reel** : Two pay off reel to feed CRC.
- **Welder** : Tail end of coil to welded to the head end of the succeed coil.
- **Pre-Cleaning** : Remove oil and dirty from CRC surface.

## Center section

### Plating and Chemical treatment.

- **Plating cell** : Strip is coated with Zinc by electrolytic process and Coating weight is controlled by quantity of electricity.
- **Chemical treatment** : Phosphate film is chemically coated on the plated zinc as pre-treatment before painting at customer.
- **Coater** : Product VN (special resin) are resin coated at coater unit.
- **Oven** : Coated resin film is baked by induction heater unit.
- **Cooling** : Strip is cooled down by air cooling system.

## Delivery section

### Inspection and winding product coil

- **Inspection** : Inspect surface of product and take samples for quality testing.
- **Shear** : Split coil to specified weigh .
- **Tension reel** : Wind a product after inspection

# Available size

