

Technical Features

- **Paintability**

Paint Adhesion Properties of Electro-Galvanized Steel Sheet

Type of Sheet	Erichsen Test (10mm cupping)	DuPont Impact Test		Checkboard Square Test (balance/100)	Spiral Test (balance/20)
		50cm/kg	20cm/kg		
EG Sheet with Phosphatized	slight change ~no change	slight change ~no change	no change	100/100	20/20
Cold-rolled Sheet with Phosphatized	slight change	slight change	no change	100/100	20/10
Cold-rolled Base Metal	no change	no change	no change	98/100	19/20

Corrosion Resistance after Painting

Type of Sheet	Salt Spray Test(days)				Outdoor Exposure Test(months)			Checkerboard Square Test (balance/100)	Spiral Test (balance/20)
	2	4	6	10	1	3	6		
EG Sheet with Phosphatized	no change	up to 1mm	1 to 5mm	5 to 10mm	no change	no change	no change	100/100	20/20
Cold-rolled Sheet with Phosphatized	up to 1mm	1 to 5mm	1 to 5mm	5 to 10mm	up to 1mm	1 to 5mm	5 to 10mm	100/100	20/20
Cold-rolled Base Metal	1 to 5mm	5 to 10mm	10mm over	10mm over	1 to 5mm	1 to 5mm	5 to 10mm	98/100	19/20

- **Weldability**
 - Spot Welding Condition

Type of Steel	Pressure, kg(lb)	Current Time, cycle	Welding Current, kA	Tensile Strength, kg(lb)
Cold-rolled Sheet	150~200(331~441)	8~10	8.0~9.0	530(1,168)
EG Sheet without Chemical Treatment	200~300(441~561)	8~10	8.0~10.0	620(1,367)
Phosphatized EG Sheet	220~300(485~561)	8~11	9.0~12.0	510(1,124)
Chromatized EG Sheet	200~300(441~561)	8~11	8.0~11.0	550(1,213)

- Seam Welding Condition

Chemical Treatment	Thickness mm(in.)	Width of Electrode tip w, mm(in.)	Pressure, kg(lb)	Time, cycle (on-off)	Current, kA	Speed, m/min.(ft/min.)
Phosphatized EG Sheet	0.8 (0.0315)	4.5 (0.1772)	300~500 (661~1,102)	3-2	15~20	1.5~2.0 (4,921~6,562)
	1.2 (0.0472)	5.5 (0.2165)	450~600 (992~1,323)	4-1-2	17~20	1.7 (5,577)
	1.6 (0.0630)	6.5 (0.2559)	500~650 (1,102~1,433)	5-1~2	18~22	1.3 (4,265)
Chromated EG Sheet	0.8 (0.0315)	4.5 (0.1772)	200~400 (441~882)	3-2	14~20	1.5 ~ 2.0 (4,921~6.562)
	1.2 (0.0472)	5.5 (0.2165)	300~400 (661~882)	4-2~3	16~21	1.6 (5,249)
	1.6 (0.0630)	6.5 (0.2559)	400~500 (882~1,102)	4-5~2	18~22	1.5 (4,921)

- **Workability**

Thickness mm(in.)	Type of Steel	Treatment	Tensile Strength kg/mm2(psi)	Elongation %,min	Erichsen Value mm(in.)	Conical Cup value mm(in.)
0.8 (0.7315)	Cold-rolled Sheet EG Sheet	-	32(45,500) 33(46,900)	38.1 49.0	10.59 (0.4169)	37.9 (1.49)
					10.90 (0.4291)	37.0 (1.46)
1.0 (0.0394)	Cold-rolled Sheet EG Sheet	-	33(46,900) 34(48,400)	48.0 48.5	10.95 (0.4311)	45.7 (1.80)
					11.30 (0.4449)	45.1 (1.78)
1.2 (0.0472)	Cold-rolled Sheet EG Sheet	-	33(46,900) 34(48,400)	48.4 48.7	11.24 (0.4425)	46.0 (1.81)
					11.95 (0.4705)	45.5 (1.79)