

Cold-Rolled / Electro-Galvanized 1300-1700 MPa grade Martensitic Steel

Benefit

- High strengthening and weight saving of deformation suppression body parts for automotive
- Cost reduction by replacement from hot-stamping material

Characteristic

Utilization of water quench process: available to supply material with same quality in Japan, USA and China

- High YS, Good bendability
⇒ Suitable application to cabin/floor parts for anti-deformation
- High strengthening achieved by lean chemistries
⇒ Good anti-hydrogen embrittlement and Good spot-weldability

Typical properties

■ Mechanical properties

JIS No. 5 test piece, Transverse direction
* Electro-galvanized CR material

	Grades	YS (MPa)	TS (MPa)	EL (%)	λ (%)	Bendability(R/t)
CR	1300	1160	1370	6	55	3.0
	1500	1310	1530	6	50	3.0
	1700	1540	1800	6	40	3.5
EG*	1300	1240	1440	5	55	3.0
	1500	1400	1600	5	45	3.2
	1700	1540	1800	5	40	3.5

■ Anti-hydrogen embrittlement

- Bending R: 10mm
- Applied stress: 0.9TS
- Thickness: 1.2mm
- HCl immersion: 0.1N x 200hr



	Grades	Evaluation results
CR	1300MS	○○○
	1500MS	○○○
	1700MS	○○○
EG	1300MS	○○○
	1500MS	○○○
	1700MS	○○○

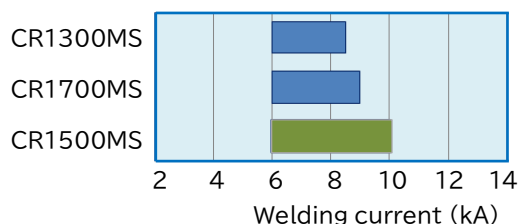
O: No crack x: Cracking

(CR1500MS pressed with Kobe original dies)

■ Spot-weldability(1.2-1.2mm)

- Electrode: radius ϕ -DR type
- Pressure: 3.6 kN
- Welding time: 12 cycle/60 Hz

Proper welding current range



■ Example

HINGE R/F

