

Cold-rolled DP800-GI HyperForm®

Advanced high-strength steel with extra formability

DP800-GI HyperForm is a cold-rolled, hot-dip galvanised dual phase steel that was developed to meet the special requirements of the automotive industry. This steel combines the strength of DP800 steel with the formability of DP600 - without compromising weldability. Thanks to its excellent properties, it offers a variety of benefits to automotive engineers and OEM's: greater design flexibility with improved press/weld shop performance, resulting in a lower total cost of ownership.

DP800-GI HyperForm is suitable for crash structure components in the body-in-white such as A-pillars and floor and sill reinforcements. It is available with galvanised coating down to thicknesses of 0.9mm.

Legend

CR = cold-rolled CP = complex phase DP = dual phase LY = low yield HY = high yield GI = hot-dip galvanised

Mechanical properties

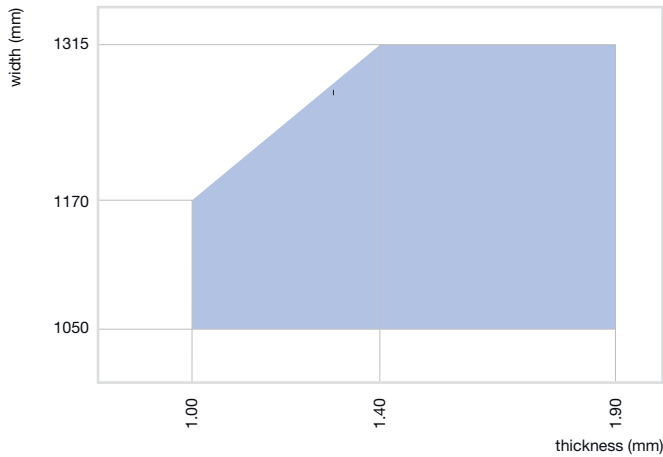
Grade	Specification	Test direction	Yield strength R_p (MPa)	Tensile strength R_m (MPa)	Elongation A_{80} (%) min	n-value min	r-value min	BH ₂ min (MPa)
CR DP800-GI HyperForm	Tata Steel specification	L or T	450-550	780-900	18	0.13	0.6	35
	Tata Steel typical	T	485	823	20	0.162	0.88	52
		L	471	820	21	0.165	0.66	48
CR440Y780T-DH	VDA 239-100	L	440-550	780-900	18	0.13	-	30

Chemical composition

	C	Si	Mn	P	S	Al _{tot}	Cr+Mo
Typical Tata Steel properties	0.15	0.42	2.06	0.008	0.002	0.57	0.408
CR DP800-GI HyperForm	≤0.16	≤0.50	≤2.20	≤0.015	≤0.005	≤0.70	≤0.45
EN 10346:2009, HCT780X	≤0.18	≤0.80	≤2.50	≤0.080	≤0.015	≤2.00	≤1.00
VDA 239-100 CR440Y780T-DP	≤0.18	≤0.80	≤2.50	≤0.080	≤0.015	0.015-2.00	≤1.40

Values provided in mass percentages

Dimensional window of CR DP800-GI HyperForm®



Relevant performance of DP800-GI HyperForm within the coated AHSS/UHSS product portfolio

Grade	Bending/ Roll forming	Deep drawing	Weldability	Crash performance/ lightweighting potential
DP600-GI	+++	+++	+	o
DP800-GI	++	++	+	+
DP800-GI HyperForm	++	+++	+	+
CP800-GI	+++	+	+	++
DP1000LY-GI	+	++	+	++
DP1000HY-GI	+	o	+	+++

o = neutral + = good ++ = excellent +++ = best

Our material experts are there to support the deployment of DP800-GI HyperForm in your specific application area. Our online material database Aurora Online provides our customers with comprehensive data sheets and ready to run input decks.

For more information (also for access to Aurora Online):

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