

Steel grades and mechanical properties (transverse test pieces)

Designation		Chemical composition % by mass						Yield strength R_e^a MPa *	Tensile strength R_m MPa *	Elongation A_{100}^b % min.	Plastic strain ratio r_{90} min.	Strain hardening exponent n_{90} min.	
		max.											
Steel grade		Symbols for the types of hot-dip coating	C	Si	Mn	P	S	Ti					
DX51D	1.0226	+Z,+ZF,+ZA,+AZ,+AS	0,12	0,50	0,60	0,10	0,045	0,30	-	270 to 500	22	-	-
DX52D	1.0350	+Z,+ZF,+ZA,+AZ,+AS							140 to 300 ^c	270 to 420	26	-	-
DX53D	1.0355	+Z,+ZF,+ZA,+AZ,+AS							140 to 260	270 to 380	30	-	-
DX54D	1.0306	+Z,+ZA							120 to 220	260 to 350	36	1,6	0,18
DX54D	1.0306	+ZF							120 to 220	260 to 350	34	1,4	0,18
DX54D	1.0306	+AZ							120 to 220	260 to 350	36	-	-
DX54D	1.0306	+AS							120 to 220	260 to 350	34	1,4 ^{d,e}	0,18 ^e
DX55D	1.0309	+AS							140 to 240	270 to 370	30	-	-
DX56D	1.0322	+Z,+ZA							120 to 180	260 to 350	39	1,9 ^d	0,21
DX56D	1.0322	+ZF							120 to 180	260 to 350	37	1,7 ^{d,e}	0,20 ^e
DX56D	1.0322	+AS							120 to 180	260 to 350	39	1,7 ^{d,e}	0,20 ^e
DX57D	1.0853	+Z,+ZA							120 to 170	260 to 350	41	2,1 ^d	0,22
DX57D	1.0853	+ZF							120 to 170	260 to 350	39	1,9 ^{d,e}	0,21 ^e
DX57D	1.0853	+AS							120 to 170	260 to 350	41	1,9 ^{d,e}	0,21 ^e