



DECLARATION OF PERFORMANCE

Pursuant to Annex III of EU Regulation No. 305/2011
(Construction Products Regulation)

No: 2014/001

Name of the manufacturer : Ereğli Demir ve Çelik Fabrikaları T.A.Ş.
Contact and Production Address : Uzunkum No:7, 67330 Kdz.Ereğli, Zonguldak TURKEY

Unique identification code of the product-type: Hot rolled products of structural steels

Type of the construction product as required:

Grade acc. to EN 10025-2	Products in the form of	Dimensions (mm)		
		Thickness	Width	Length
S235JR, S235J0, S235J2, S235JR(Cu), S235JRC, S235J2C+N, S235J2+N, S275JR, S275J0, S275J2, S275J2+N, S275JRC, S275J2C+N, S355JR, S355J0, S355J2, S355K2, S355J2C+N, S355J2+N, S355J2+N(Cu), E295, E355, E360	Coils	1,5 – 25,0	700 – 1525	-
	Sheets cut from coils	1,5 – 15,0	700 – 1525	1500 - 15000
	Slitted Coils	1,5 – 6,0	62 – 533	-
	Plates	5,0 – 100,0	1000 – 3800	2000 - 12000

Grade acc. to EN 10025-3	Products in the form of	Dimensions (mm)		
		Thickness	Width	Length
S275N, S275NL, S355N, S355NL, S420N, S420NL, S460N, S460NL	Coils	1,5 – 25,0	700 – 1525	-
	Sheets cut from coils	1,5 – 15,0	700 – 1525	1500 - 15000
	Plates	5,0 – 60,0	1000 – 3000	2000 - 12000

Note: Quality (Grade) "S460N" and "S460NL" can be produced up to 20 mm thickness.

Intended use as foreseen by the manufacturer: Construction works.

System of assessment and verification of constancy of performance of the construction product as set out: System 2 +

Factory Production Control System audit has been carried out on the basis of the certificate by Szutest Teknik Kontrol ve Belgelendirme Hiz. Tic. Ltd. Şti. Notified Body Number;2195, under system 2+

EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.

Issued Capital: 3.500.000.000.-TL. TAN: 352 000 64 26 Kdz. Ereğli

MERSİS Number (İstanbul Head Office):0352-0006-4260-0020

Trade Registry Number (İstanbul Department): 90659 Trade Registry Number (Ereğli Department): 1574/272

www.erdemir.com.tr

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Ankara: Beştepe Mah. Dumlupınar Bulvarı No: 12 06530 Yenimahalle ANKARA -TURKEY

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Plant: Uzunkum Cad. No: 7 Kdz. Ereğli 67330 ZONGULDAK-TURKEY

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Declared performances:

Basic Characteristics	Performance							Harmonised Technical Specification	
	Type and Grade		Nominal thickness (mm)						
Yield Strength ReH (MPa)		≤16	16<≤40	40<≤63	63<≤80	80<≤100			
	S235JR/JR(Cu)/JRC/JO/J2/J2+N/J2C+N	235 min	225 min	215 min	215 min	215 min			
	S275JR/JRC/JO/J2/J2+N/J2C+N	275 min	265 min	255 min	245 min	235 min			
	S355JR/JO/J2/J2+N/J2+N(Cu)/J2C+N/K2	355 min	345 min	335 min	325 min	315 min			
	E295	295 min	285 min	275 min	265 min	255 min			
	E335	335 min	325 min	315 min	305 min	295 min			
	E360	360 min	355 min	345 min	335 min	325 min			
Tensile Strength Rm (MPa)	Type and Grade		Nominal thickness (mm)						
			t < 3		3 ≤ t ≤ 100				
	S235JR/JR(Cu)/JRC/JO/J2/J2+N/J2C+N		360 to 510		360 to 510				
	S275JR/JRC/JO/J2/J2+N/J2C+N		430 to 580		410 to 560				
	S355JR/JO/J2/J2+N/J2+N(Cu)/J2C+N/K2		510 to 680		470 to 630				
	E295		490 to 680		470 to 610				
	E335		590 to 770		570 to 710				
E360		690 to 900		670 to 830					
Elongation % (Transverse) GI:80 mm for t < 3.0 mm 5.65Sqrt A for t ≥ 3.0 mm	Type and Grade		Nominal thickness (mm)						
			t = 1.5	1.5 < t ≤ 2	2 < t ≤ 2.5	2.5 < t < 3	3 ≤ t ≤ 40	40 < t ≤ 63	63 < t ≤ 100
	S235JR/JR(Cu)/JRC/JO/J2/J2+N/J2C+N		16	17	18	19	24	23	22
	S275JR/JRC/JO/J2/J2+N/J2C+N		14	15	16	17	21	20	19
	S355JR/JO/J2/J2+N/J2+N(Cu)/J2C+N/K2		13	14	15	16	20	19	18
	E295		11	12	13	14	18	17	16
	E335		7	8	9	10	14	13	12
E360		4	5	6	7	10	9	8	
Impact Energy (J) (Impact test is not required for thickness thinner than 6 mm)	Type and Grade		Temperature (°C)		Nominal thickness (mm)			EN 10025-2	
					t ≤ 25				
	S235JR/JR(Cu)/JRC/JO/J2/J2+N/J2C+N		20		27				
	S275JR/JRC/JO/J2/J2+N/J2C+N		0		27				
	S355JR/JO/J2/J2+N/J2+N(Cu)/J2C+N		-20		27				
S355K2		-20		40					
CEV % Max (CEV is increased by 0.01 % for Si ≤ 0.25 %, and 0.02 % for Si ≤ 0.030 %)	Type and Grade		Nominal thickness (mm)						
			t ≤ 30		30 < t ≤ 40		40 < t ≤ 100		
	S235JR/JR(Cu)/JRC/JO/J2/J2+N/J2C+N		0,35		0,35		0,38		
	S275JR/JRC/JO/J2/J2+N/J2C+N		0,40		0,40		0,42		
S355JR/JO/J2/J2+N/J2+N(Cu)/J2C+N/K2		0,45		0,47		0,47			
Chemical Composition (t ≤ 100 mm)	Type and Grade		C % max	Si % max	Mn % max	P % max	S % max	N % max	Cu % max
	S235JR/JR(Cu)/JRC		0,17	-	1,40	0,035	0,035	0,012	0,55
	S235JO		0,17	-	1,40	0,030	0,030	0,012	0,55
	S235J2/J2+N/J2C+N		0,17	-	1,40	0,025	0,025	-	0,55
	S275JR/JRC		0,21	-	1,50	0,035	0,035	0,012	0,55
	S275JO		0,18	-	1,50	0,030	0,030	0,012	0,55
	S275J2/J2+N/J2C+N		0,18	-	1,50	0,025	0,025	-	0,55
	S355JR		0,24	0,55	1,60	0,035	0,035	0,012	0,55
	S355JO		0,20	0,55	1,60	0,030	0,030	0,012	0,55
	S355J2/J2+N/J2+N(Cu)/J2C+N/K2/K2		0,20	0,55	1,60	0,025	0,025	-	0,55
	E295		-	-	-	0,045	0,045	0,012	-
	E335		-	-	-	0,045	0,045	0,012	-
	E360		-	-	-	0,045	0,045	0,012	-

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Basic Characteristics	Performance			Harmonised Technical Specification
	Type and Grade	Nominal thickness (mm)		
Yield Strength ReH (MPa)		≤16	16<t≤40	40<t≤60
	S275N/NL	275 min	265 min	255 min
	S355N/NL	355 min	345 min	335 min
	S420N/NL	420 min	400 min	390 min
	S460N/NL	460 min	440 min	430 min
Tensile Strength Rm (MPa)		Nominal thickness (mm)		
		1,5 ≤ t ≤ 60		
	S275N/NL	370 to 510		
	S355N/NL	470 to 630		
	S420N/NL	520 to 680		
Elongation % (Transverse) Gl:80 mm for t < 3.0 mm 5.65Sqrt A for t ≥ 3.0 mm		Nominal thickness (mm)		
		1,5 ≤ t ≤ 60		
	S275N/NL	24		
	S355N/NL	22		
	S420N/NL	19		
Impact Energy (J) (Impact test is not required for thickness thinner than 6 mm)		Temperature (°C)	Nominal thickness (mm)	
			t ≤ 60	
	S275N	-20	40	
	S275NL	-50	27	
	S355N	-20	40	
	S355NL	-50	27	
	S420N	-20	40	
	S420NL	-50	27	
	S460N	-20	40	
S460NL	-50	27		
CEV % Max (CEV is increased by 0.01 % for Si ≤ 0.25 %, and 0.02 % for Si ≤ 0.030 %)		Nominal thickness (mm)		
		t ≤ 60		
	S275N/NL	0,40		
	S355N/NL	0,43		
	S420N/NL	0,48		
S460N/NL	0,53			

EN 10025-3

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Basic Characteristics	Performance															Harmonised Technical Specification
	Type and Grade	C % max	Si % max	Mn % max	P % max	S % max	Nb % max	V % max	Al _(total) % min	Ti % max	Cr % max	Ni % max	Mo % max	Cu % max	N % max	
Chemical Composition (t ≤ 60mm)	S275N	0,20	0,45	0,45-1,60	0,035	0,035	0,06	0,070	0,015	0,06	0,35	0,35	0,13	0,60	0,017	
	S275NL	0,18	0,45	0,45-1,60	0,030	0,025	0,06	0,070	0,015	0,06	0,35	0,35	0,13	0,60	0,017	
	S355N	0,22	0,55	0,85-1,75	0,035	0,035	0,06	0,140	0,015	0,06	0,35	0,55	0,13	0,60	0,017	
	S355NL	0,20	0,55	0,85-1,75	0,030	0,025	0,06	0,140	0,015	0,06	0,35	0,55	0,13	0,60	0,017	
	S420N	0,22	0,65	0,95-1,80	0,035	0,035	0,06	0,220	0,015	0,06	0,35	0,85	0,13	0,60	0,027	
	S420NL	0,22	0,65	0,95-1,80	0,030	0,025	0,06	0,220	0,015	0,06	0,35	0,85	0,13	0,60	0,027	
	S460N	0,22	0,55	0,95-1,80	0,035	0,035	0,06	0,220	0,015	0,06	0,35	0,85	0,13	0,60	0,027	
	S460NL	0,22	0,55	0,95-1,80	0,030	0,025	0,06	0,220	0,015	0,06	0,35	0,85	0,13	0,60	0,027	

Abdullah GÜNDÜZ

Director

Quality Technology

Esat GÜNDAY

Executive Vice President

Operations

APRIL 2014 / ZONGULDAK

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