



DECLARATION OF PERFORMANCE

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

No: 2020/001

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	Coils	1,5 - 25,0	700 - 1525	-
	Sheets cut from coils	1,5 - 15,0	700 - 1525	1500 - 15000
S275JR , S275J0 , S275J2 S275J2+N,S275JRC, S275J2C+N S355JR , S355JR+N S355J0 S355J0+N, S355J2 , S355K2 S355J2C+N, S355J2+N S355J2 (Cu) E295 , E355, E360	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
S355N, S355NL S420N, S460N	Coils	2,1 - 20,0	700 - 1525	-
	Sheets cut from coils	2,1 - 15,0	700 - 1525	1500 - 15000
	Plates	8,0 - 60,0	1000 - 3000	2000 - 12000

Grade acc. to EN 10025-4	Products in the form of	Dimensions (mm)		
		Thickness	Width	Length
S275M, S355M, S420M, S460M	Coils	2,10 - 25,00	700 - 1525	-
	Sheets cut from coils	2,10 - 15,00	700 - 1525	1500 - 15000

Grade acc. to EN 10025-5	Products in the form of	Dimensions (mm)		
		Thickness	Width	Length
S355J2W	Coils	8 - 16,00	700 - 1525	-
	Sheets cut from coils	8 - 15,00	700 - 1525	2000 - 15000
	Plates	8,0 - 60,0	1000 - 3000	2000 - 12000

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 Uygunluk Değerlendirme A.Ş. Notified Body Number:2195, under system 2+



MADEN METALÜRJİ
GRUBU

EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.

Uzunkum Caddesi No: 7
Kdz. Ereğli 67330 ZONGULDAK
T: 0372 323 2500 - F: 0372 333 1500
www.erdemir.com.tr

Ticaret Sicil No:
İstanbul-86637 Ereğli-1574/272

Mersis No:
0352000642600020

KEP Adresi:
erdemir@hs01.kep.tr



Basic Characteristics	Performance	Harmonised Technical Specification							
		EN10025-1							
Yield Strength ReH (MPa)	Type and Grade	Nominal Thickness							
		t ≤ 16	16 < t ≤ 40	40 < t ≤ 63	63 < t ≤ 80	80 < t ≤ 100			
	S235JR/JR(Cu)JRC/J0/J2/J2+N/J2C+N	235 min	225 min	215 min	215 min	215 min			
	S235JR Mod	235 min	-	-	-	-	-	-	-
	S275JR/JRC/J0/J2/J2+N/J2C+N	275 min	265 min	255 min	245 min	235 min			
	S275JRC Mod	300 min	-	-	-	-	-	-	-
	S355JR/JR+N/JR Mod/J0/J0+N/J2/J2+N/J2 (Cu)J2C+N/K2+N	355 min	345 min	335 min	325 min	315 min			
	S355J2 Mod	355 min	345 min	-	-	-	-	-	-
	S355J2C+N Mod	355 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							
		t < 3	3 ≤ t ≤ 100						
	S235JR/JR Mod/JR(Cu)JRC/J0/J2/J2+N/J2C+N	360 to 510			360 to 510				
	S275JR/JRC/J0/J2/J2+N/J2C+N	430 to 580			410 to 560				
	S275JRC Mod	430 to 580			430 to 570				
	S355 J2 Mod	min. 470			min. 470				
	S355JR/JR+N/J0/J0+N/J2/J2+N/J2 (Cu)J2C+N/J2C+N Mod/K2+N	510 to 680			470 to 630				
	S355 JR Mod	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							
		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 Mod/JR(Cu)JRC/J0/J2/J2+N/J2C+N	16	17	18	19	24	23	22	
	S275JR/JRC/J0/J2/J2+N/J2C+N	14	15	16	17	21	20	19	
	S275JRC Mod	14	15	16	17	21	-	-	
	S355JR/JR+N/J0/J0+N/J2/J2+N/J2 (Cu)J2C+N/K2+N	13	14	15	16	20	19	18	
	S355 JR Mod (A5.65Sqrt A for 8 ≤ t ≤ 50)	-	-	-	-	20 (8 ≤ t ≤ 40)	19 (40 < t ≤ 50)		
	S355J2	13	14	15	16	20	-	-	
	S355J2 Mod	-	-	-	-	20 (8 ≤ t ≤ 40)	-	-	
	S355 J2C+N Mod	13	14	15	16	20 (t ≤ 16)	-	-	
	E295	11	12	13	14	18	17	16	
E335	7	8	9	10	14	13	12		
E360	4	5	6	7	10	9	8		



MADEN METALÜRJİ
GRUBU

EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.

Uzunyum Caddesi No: 7
Kdz. Ereğli 67330 ZONGULDAK
T: 0372 323 2500 - F: 0372 333 1500
www.erdemir.com.tr

Ticaret Sicil No:
İstanbul-86637 Ereğli-1574/272

Mersis No:
0352000642600020

KEP Adresi:
erdemir@hs01.kep.tr



Impact Energy (J) (Impact test is not required for thickness thinner than 6 mm)	Type and Grade	Temperature (°C)	Nominal Thickness t ≤ 25				Harmonised Technical Specification			
	JR/JR Mod/JR+N/JR(Cu)/JRC/JRC Mod	20	27							
	J0/J0+N	0	27							
	J2/J2+N/J2+N(Cu)/J2C+N/J2C+N Mod/J2 Mod/J2 (Cu)	-20	27							
	S355K2/K2+N	-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								
		t ≤ 30	30 < t ≤ 40	40 < t ≤ 100						
		S235JR/JR(Cu)/JRC/J0/J2/J2+N/J2C+N	0,35	0,35	0,38					
		S235JR Mod	0,35	0,35	0,35					
		S275JR/JRC/J0/J2/J2+N/J2C+N	0,40	0,40	0,42					
		S275JRC Mod	0,43 for t ≤ 25	-	-					
		S355JR Mod	0,43	0,43	0,43					
		S355JR/JR+N/J0/J0+N/J2/J2+N/J2 (Cu)/J2C+N/K2+N	0,45	0,47	0,47					
		S355J2C+N Mod	0,49	-	-					
	S355J2 Mod	0,55	-	-						
Chemical Composition (t ≤ 100 mm)	Type and Grade	C	Si	Mn	P	S	N	Cu	EN10025-1	
		% max.	% max.	% max.	% max.	% max.	% max.	% max.		
		S235JR/JR(Cu)	0,20	0,40	1,40	0,035	0,035	0,012		0,55
		S235JRC/JR Mod	0,17	-	1,40	0,035	0,035	0,012		0,55
		S235J2/J2+N/J2C+N	0,17	-	1,40	0,025	0,025	-		0,55
		S275JR	0,22	0,40	1,50	0,030	0,030	0,012		0,55
		S275JRC	0,21		1,50	0,035	0,035	0,012		0,55
		S275JRC Mod	0,21	0,05-0,17	1,50	0,035	0,035	0,012		0,55
		S275J2/J2+N/J2C+N	0,18	-	1,50	0,025	0,025	-		0,55
		S355JR/JR+N/JR Mod	0,24	0,55	1,60	0,035	0,035	0,012		0,55
		S355 J2 Mod	0,22	0,55	1,60	0,025	0,025	-		0,55
		S355J0/J0+N	0,22	0,55	1,60	0,030	0,030	0,012		0,55
		S355J2+N	0,20	0,03	1,60	0,025	0,025	-		0,55
		S355J2/J2C+N/J2 (Cu)/K2+N	0,22	0,55	1,60	0,025	0,025	-		0,55
		S355J2C+N Mod	0,14-0,20	0,10-0,30	1,20-1,60	0,025	0,020	-		-
		S275JR Mod	0,14-0,20	0,15-0,25	1,00-1,35	0,025	0,025	0,012		0,55
		E295	-	-	-	0,045	0,045	0,012		-
	E335	-	-	-	0,045	0,045	0,012	-		
	E360	-	-	-	0,045	0,045	0,012	-		



MADEN METALÜRJİ
GRUBU

EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.

Uzunyum Caddesi No: 7
Kdz. Ereğli 67330 ZONGULDAK
T: 0372 323 2500 - F: 0372 333 1500
www.erdemir.com.tr

Ticaret Sicil No:
İstanbul-86637 Ereğli-1574/272

Mersis No:
0352000642600020

KEP Adresi:
erdemir@hs01.kep.tr



Basic Characteristics	Performance			Harmonised Technical Specification	
Yield Strength ReH (MPa)	Type and Grade	Nominal Thickness			EN10025-1
		t ≤ 16	16 < t ≤ 40	40 < t ≤ 63	
	S355N/NL	355 min.	345 min.	335 min.	
	S420N	420 min.	400 min.		
S460N	460 min.	440 min.			
Tensile Strength Rm (MPa)	Type and Grade	Nominal Thickness			
		1,5 ≤ t ≤ 60			
	S355N/NL	470 to 630			
	S420N	520 to 680			
S460N	540 to 720				
Elongation % (Transverse) GI:80 mm for t < 3.0 mm 5.65Sqrt A for t ≥ 3.0 mm	Type and Grade	Nominal Thickness			
		1,5 ≤ t ≤ 60			
	S355N/NL	22			
	S420N	19			
S460N	17				
Impact Energy (J) (Impact test is not required for thickness thinner than 6 mm)	Type and Grade	Temperature (°C)	Nominal Thickness t ≤ 25		
		S355N	-20	40	
	S355NL	-50	27		
	S420N	-20	40		
S460N	-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			
		t ≤ 60			
	S355N/NL	0,43			
	S420N/NL	0,48			
S460N/NL	0,53				

The yield value specified for S460N is not guaranteed above 800°C for thickness greater than 12 mm.

Chemical Composition	Type and Grade	C	Si	Mn	P	S	Nb	V	Al _(total)	Ti	Cr	Ni	Mo	Cu	N	Harmonised Technical Specification
		% max.	% max.	% max.	% max.	% max.	% max.	% max.	% min.	% max.	% max.	% max.	% max.	% max.	% max.	
	S355N	0.20	0.50	0.90-1.65	0.030	0.025	0.05	0.12	0.02	0.05	0.30	0.50	0.10	0.55	0.015	EN 10025-1
	S355NL	0.18	0.50	0.90-1.65	0.025	0.020	0.05	0.12	0.02	0.05	0.30	0.50	0.10	0.55	0.015	
	S420N	0.20	0.60	1.00-1.70	0.030	0.025	0.05	0.20	0.02	0.05	0.30	0.80	0.10	0.55	0.025	
	S460N	0.20	0.60	1.00-1.70	0.030	0.025	0.05	0.20	0.02	0.05	0.30	0.80	0.10	0.55	0.025	



MADEN METALÜRJİ GRUBU

EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.

Uzunum Caddesi No: 7
Kdz. Ereğli 67330 ZONGULDAK
T: 0372 323 2500 - F: 0372 333 1500
www.erdemir.com.tr

Ticaret Sicil No:
İstanbul-86637 Ereğli-1574/272

Mersis No:
0352000642600020

KEP Adresi:
erdemir@hs01.kep.tr



Basic Characteristics	Performance			Harmonised Technical Specification
Yield Strength ReH (MPa)	Type and Grade	Nominal Thickness min.		EN10025-1
		t ≤ 16	16 < t ≤ 20	
	S275M	275 min.	265 min.	
	S355M	355 min.	345 min.	
	S420M	420 min.	400 min.	
S460M	460 min.	440 min.		
Tensile Strength Rm (MPa)	Type and Grade	Nominal Thickness		EN10025-1
		1,5 ≤ t ≤ 200		
	S275M	370 - 530		
	S355M	470 - 630		
	S420M	520 - 680		
S460M	540 - 720			
Elongation % (Transverse) 5.65Sqrt A	Type and Grade	Nominal Thickness		EN10025-1
		1,5 ≤ t ≤ 60		
	S275M	24 min.		
	S355M	22 min.		
	S420M	19 min.		
S460M	17 min.			
Impact Energy (J) (Impact test is not required for thickness thinner than 6 mm)	Type and Grade	Temperature (°C)	Nominal Thickness t ≤ 20	EN10025-1
	S275M, S355M, S420M, S460M	-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		EN10025-1
		t ≤ 16	t > 16	
	S275M	0,34		
	S355M	0,39		
	S420M	0,43	0,45	
S460M	0,45	0,46		

Chemical Composition	Type and Grade	C	Mn	p	S	Si	Al	Cr	Cu	Mo	Ni	Nb	Ti	V	N	Harmonised Technical Specification
		% max.	% max.	% max.	% max.	% max.	% min.	% max.	% max.	% max.	% max.	% max.	% max.	% max.	% max.	
	S275M	0.13	1.50	0.030	0.025	0.50	0.020	0.30	0.55	0.10	0.30	0.05	0.05	0.08	0.015	EN 10025-1
	S355M	0.14	1.60	0.030	0.025	0.50	0.020	0.30	0.55	0.10	0.50	0.05	0.05	0.10	0.015	
	S420M	0.16	1.70	0.030	0.025	0.50	0.020	0.30	0.55	0.20	0.80	0.05	0.05	0.12	0.025	
	S460M	0.16	1.70	0.030	0.025	0.60	0.020	0.30	0.55	0.20	0.80	0.05	0.05	0.20	0.025	



MADEN METALÜRJİ
GRUBU

EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.

Uzunkum Caddesi No: 7
Kdz. Ereğli 67330 ZONGULDAK
T: 0372 323 2500 - F: 0372 333 1500
www.erdemir.com.tr

Ticaret Sicil No:
İstanbul-86637 Ereğli-1574/272

Mersis No:
0352000642600020

KEP Adresi:
erdemir@hs01.kep.tr



Basic Characteristics	Performance						Harmonised Technical Specification
Yield Strength ReH (MPa)	Type and Grade	Nominal Thickness					EN10025-1
		t ≤ 16	16 < t ≤ 40	40 < t ≤ 63	63 < t ≤ 80	80 < t ≤ 100	
	S355J2W	355 min.	345 min.	335 min.	325 min.	315 min.	
Tensile Strength Rm (MPa)	Type and Grade	Nominal Thickness					
		t < 3		3 ≤ t ≤ 100			
	S355J2W	510 - 680		470 - 630			
Elongation % (Transverse) GI:80 mm for t < 3.0 mm 5.65Sqrt A for t ≥ 3.0 mm	Type and Grade	Nominal Thickness					
		2 < t ≤ 2.5	2.5 < t < 3	3 ≤ t ≤ 40	40 < t ≤ 63	63 < t ≤ 100	
	S355J2W	15	16	20	19	18	
Impact Energy (J) (Impact test is not required for thickness thinner than 6 mm)	Type and Grade	Temperature (°C)			Nominal Thickness t ≤ 25		
	S355J2W	-20			27		
CEV %max. (C Eeq (IIW) = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 formula is applied for S355J2W according to ladle analysis.	Type and Grade	Nominal Thickness					
	S355J2W	0,52					

Chemical Composition	Type and Grade	C	Mn	P	S	Si	Al	Cr	Cu	Ni	V, Nb, Ti	Harmonised Technical Specification
		% max.		% max.	% max.		% min.			% max.		
	S355J2W	0.20	0.50-1.50	0.030	0.030	0.15-0.50	0.02	0.40-0.80	0.20-0.55	0.65	*	EN 10025-1

* The steels shall contain at least one of the following elements: Al total ≥ 0,020% , Nb: 0,015-0,060% , V:0,02-0,12% , Ti:0,02-0,10%. If these elements are used in combination, at least one of them shall be present with the minimum content indicated for the grade S355J2W.

Impact test is not carried out for thickness thinner than 6 mm for all grades.

Signed for and on behalf of the Ereğli Demir ve Çelik Fabrikaları T.A.Ş. by:

Serkan DİKEÇ

Manager

Quality Metallurgy

Ural DURUSU

Executive Vice President

Operations

2020 / ZONGULDAK



MADEN METALÜRJİ
GRUBU

EREĞLİ DEMİR VE ÇELİK FABRİKALARI T.A.Ş.

Uzunkum Caddesi No: 7
Kdz. Ereğli 67330 ZONGULDAK
T: 0372 323 2500 - F: 0372 333 1500
www.erdemir.com.tr

Ticaret Sicil No:
İstanbul-86637 Ereğli-1574/272

Mersis No:
0352000642600020

KEP Adresi:
erdemir@hs01.kep.tr