

Lloyd's Register of Shipping (LR) grade	Mechanical properties			Mechanical properties			heat treatment	Chemical composition															
	yield point		tensile strength	impact strength of ISO-V-notched bars (average determined on 3 specimens)				(heat analysis, %)															
	reference thickness	min.		test temp	sample location	min.		refer. thickness	C	Si	Mn	P	S	Al	Nb	V	Cu	Cr	Ni	Mo	Ti	N	miscellaneous
mm	N/mm ²	N/mm ²	°C		J	mm																	
A	≤25.5	235	400-490					≤12.5	max.	max.	-	max.	max.										Mn C + 6 ≤ 0.40
	>25.5	225		>12.5	0.23	0.50	≥2.5xC	0.050	0.050														
AH36		355	490-620	± 0	L	34	>35 mm N	max. 0.18	max. 0.50	0.70 1.60	max. 0.040	max. 0.040	min. 0.015	0.015	0.03 0.10								Al, Nb, V separately or combined
DH36		355	490-620	-20	L	34	>12.5 mm N	max. 0.18	max. 0.50	0.90 1.60	max. 0.04	max. 0.04	0.015 0.06	0.015 0.05	0.03 0.10								Al, Nb, V alternatively or combined
EH36		355	490-620	-40	L	34	N	max. 0.18	0.10 0.50	0.90 1.60	max. 0.04	max. 0.04	min. 0.015	0.015 0.05	0.03 0.10								Al, Nb, V separately or combined
S355J2+N		315-355	490-630	-20	L	27	N	max. 0.22	max. 0.55	max. 1.60	max. 0.035	max. 0.035				max. 0.55	max. 0.30	max. 0.30	max. 0.08				CEV max. 0,47
S355G3+N		355	470-630	-40	L	50	N	max. 0.18	max. 0.50	0.90 1.65	max. 0.030	max. 0.025	min. 0.020	max. 0.060	max. 0.12	max. 0.35	max. 0.30	max. 0.50	max. 0.10	max. 0.030	max. 0.015		
S355G10+M		355	470-630	-40	T	50	M	max. 0.12	0.15 0.55	max. 1.65	max. 0.015	max. 0.005	max. 0.015	max. 0.030	max. 0.060	max. 0.30	max. 0.20	max. 0.70	max. 0.08	max. 0.025	max. 0.010		

Location of sample

L = longitudinal

T = transverse

Heat treatment

N = normalized

M = thermomechanically rolled

Chemical composition

C = Koolstof

V = Vanadium

Si = Silicium

Cu = Koper

Mn = Mangaan

Cr = Chroom

P = Fosfor

Ni = Nikkel

S = Zwavel

Mo = Molybdeen

Al = Aluminium

Ti = Titanium

Nb = Niobium

N = Stikstof



T +31 251 36 22 00 E info@deboerstaal.nl