

Mechanical Properties

Specification	Grade	Yield Strength (MPa min)	Ultimate Tensile Strength (MPa min)	%Elongation (min)	Bend	Hardness
SAILHARD						200 BHN
DSQ LO-PEARL		245	375	25	37	
SAIL SPP 400	HARDOX 400	900	1100	10		
SAIL SPP 700	WELDOX 700E	620	725-860	16		
SAIL HITEN		550	690	15	3.5T	
GOST 19282	09G2S	345 (t:8-10) 325 (t:10-20) 305 (t:20-32) 285 (t:32-40)	490 (t:8-10) 470 (t:10-20) 460 (t:20-32) 450 (t:32-40)	21	2T	
	10G2S1	345 (t:8-10) 335 (t:10-20) 325 (t:20-32) 325 (t:32-40)	490 (t:8-10) 480 (t:10-20) 470 (t:20-32) 450 (t:32-40)	21	2T	

Note : The mechanical properties specified in API Grades are for pipes only.
HRC/Plate properties are to be mutually agreed upon by the producers & pipe manufacturers.

ABS Steel Plates

Grade	Chemistry	Tensile Strength
A	C 0.21, Mn 2.5 x C% min S, P 0.035, Si : 0.50 max Al 0.02 min, CE 0.40	YS 235 MPa, % EL : 22 (50 GL) UTS 400-520 MPa Impact 34J/RT (> 50 mm)
B	C 0.21, Mn 0.80 min S, P 0.035, Si : 0.35 max Al 0.02 min, CE 0.40	YS 235 MPa UTS 400-520 MPa Impact 27J/0° (> 25 mm)
C	C 0.21, Mn 0.60 min S, P 0.035 Al 0.03 min, CE 0.040	YS 315 MPa UTS 400-520 MPa Impact 27J/-20°C for all thicknesses
AH 32 DH 32 EH 32	C 0.18, Mn 0.90-1.60 Nb 0.02-0.05, Si : 0.50 max S 0.035, P 0.035 V 0.05-0.10, Ti 0.02 max	YS 315 MPa, UTS : 440-590 MPa Imp AH 32 34 J min at 0°C DH 32 34 J min at -20°C EH 32 34 J min at -40°C
AH 36 DH 36 EH 36	C 0.18, Mn 0.90-1.60 Si : 0.50 max S 0.035, P 0.035, Nb 0.02-0.05 V 0.05-0.10, Ti 0.02 max	YS 355 MPa UTS 490-620 MPa Imp AH 36 34 J min at 0°C DH 36 34 J min at -20°C EH 36 34 J min at -40°C