

CHEMICAL REQUIREMENTS

ALLOY AND CARBON STEEL ASTM A490 FOR STRUCTURAL SERVICE

ALLOY	Tensile Min Mpa	Yield Strength Min 0.2% Mpa	Elongation Min %	Reduction Min %	Hardness HB
TYPE1	1035 - 1170	895	14	40	311-352
TYPE2	1035 - 1170	895	14	40	311-352
TYPE3	1035 - 1170	895	14	40	311-352

CHEMICAL REQUIREMENTS

ALLOY AND CARBON STEEL ASTM A449 FOR STRUCTURAL SERVICE

ALLOY	Dia	Tensile Min Mpa	Yield Strength Min 0.2% Mpa	Elongation Min %	Reduction Min %	Hardness HB
TYPE1	1/4 to 1"	825	635	14	35	255-321
	1 to 1 1/2	725	560	14	35	223-285
	1 1/2 to 3"	400	620	14	35	183-235
TYPE2	1/4 to 1"	825	635	14	35	255-321
	1 to 1 1/2	725	560	14	35	223-285
	1 1/2 to 3"	400	620	14	35	183-235

CHEMICAL REQUIREMENTS

ALLOY AND CARBON STEEL ASTM A325 FOR STRUCTURAL SERVICE

ALLOY	Dia	Tensile Strength min	Proof Load	Yield Strength Method	Hardness HB
TYPE1 TYPE 3A TYPE 3B TYPE 3C	1/2" - 1"	827	586	635	253-319
TYPE 3D TYPE 3E TYPE 3F	1 1/8" - 1 1/2"	724	510	560	223-286

CHEMICAL REQUIREMENTS

ALLOY AND CARBON STEEL ASTM A307 FOR STRUCTURAL SERVICE

ALLOY	Tensile Min Mpa	Yield Strength Min 0.2% Mpa	Elongation Min %	Reduction Min %	Hardness HB
GRADE A	415	-	18	-	121-241
GRADE B	415-690	-	18	-	121-212
GRADE C	400-550	50	23	-	-