

# TABLE WEIGHT

SNI 2052-2017

## PLAIN BARS

NO.	SIZE STANDARD	THEORETICAL WEIGHT KG/M	PCS X BUNDLE	TOTAL PCS
1	P8mm 12 m	4.740	50x6	300
2	P10mm 12 m	7.404	50x6	300
3	P12mm 12 m	10.656	40x5	200
4	P16mm 12 m	18.936	-	100
5	P19mm 12 m	26.712	-	100
6	P22mm 12 m	35.808	-	80
7	P25mm 12 m	46.236	-	50
8	P32mm 12 m	75.756	-	30

## DEFORMED BARS

NO.	SIZE STANDARD	THEORETICAL WEIGHT KG/M	PCS X BUNDLE	TOTAL PCS
1	S8mm 12 m	4.740	50x6	300
2	S10mm 12 m	7.404	50x6	300
3	S13mm 12 m	12.504	40x5	200
4	S16mm 12 m	18.936	-	100
5	S19mm 12 m	26.712	-	100
6	S22mm 12 m	35.808	-	80
7	S25mm 12 m	46.236	-	80
8	S29mm 12 m	62.220	-	40
9	S32mm 12 m	75.756	-	30
10	S36mm 12 m	95.880	-	20
11	S40mm 12 m	118.380	-	20

## DEFORMED BARS

	Designations	Nominal diameter mm	Nominal Area of cross-section mm	Unit/Weight kg/m	Inner diameter mm	Pitch (P) mm	Height mm	Max. Gap mm
SNI 07 - 2052 - 2017	S 8	8	50	0.395	7.3	5.6	0.4 - 0.8	3.1
	S 10	10	79	0.617	9.0	7	0.5 - 1.0	3.9
	S 13	13	133	1.042	12.0	9.1	0.7 - 1.3	5.1
	S 16	16	201	1.578	15.0	11.2	0.8 - 1.6	6.3
	S 19	19	284	2.226	18.0	13.3	1.0 - 1.9	7.5
	S 22	22	380	2.984	21.0	15.4	1.1 - 2.2	8.6
	S 25	25	491	3.853	24.0	17.5	1.3 - 2.5	9.8
	S 29	29	661	5.185	27.4	20.3	1.5 - 2.9	11.4
	S 32	32	804	6.313	30.3	22.4	1.6 - 3.2	12.5
	S 36	36	1018	7.990	34.0	25.2	1.8 - 3.6	14.1
	S 40	40	1257	9.865	38.0	28	2.0 - 4.0	15.7
S 50	50	1964	15.413	48.0	35	2.5 - 5.0	19.6	
JIS  G3112  2010	D 10	9.53	0.7133	0.560	±7	6.7	0.4 - 0.8	7.5
	D 13	12.7	1.267	0.995	±7	8.9	0.5 - 1.0	10
	D 16	15.9	1.986	1.56	±5	11.1	0.7 - 1.4	12.5
	D 19	19.1	2.865	2.25	±5	13.4	1.0 - 2.0	15
	D 22	22.2	3.871	3.04	±5	15.5	1.1 - 2.2	17.5
	D 25	25.4	5.067	3.98	±5	17.8	1.3 - 2.6	20
	D 29	28.6	6.424	5.04	±4	20.0	1.4 - 2.8	22.5
	D 32	31.8	7.942	6.23	±4	22.3	1.6 - 3.2	25
	D 35	34.9	9.566	7.51	±4	24.4	1.7 - 3.4	27.5
D 38	38.1	11.40	8.95	±4	26.7	1.9 - 3.8	30	
ASTM  A615 A706	#3	9.5	0.71	0.560	±4	6.7	0.38	3.6
	#4	12.7	1.29	0.994	-6+0	8.9	0.51	4.9
	#5	15.9	1.99	1.552	-6+0	11.1	0.71	6.1
	#6	19.1	2.84	2.235	-6+0	13.3	0.97	7.3
	#7	22.2	3.87	3.042	-6+0	15.5	1.12	8.5
	#8	25.4	5.10	3.973	-6+0	17.8	1.27	9.7
	#9	28.7	6.45	5.060	-6+0	20.1	1.42	10.9
	#10	32.3	8.19	6.404	-6+0	22.6	1.63	12.4
#11	35.8	10.06	7.907	-6+0	25.1	1.80	13.7	
BS	D 10	10	0.785	0.616	-6			
	D 12	12	1.131	0.888	-4			
	D 16	16	2.011	1.579	-4			
	D 20	20	3.142	2.466	-4			
	D 22	22	3.801	2.984	-4			
	D 25	25	4.909	3.854	-4			
	D 28	28	6.158	4.834	-4			
	D 32	32	8.042	6.313	-4			
	D 38	38	11.341	8.902	-4			
	D 40	40	12.570	9.870	-4			
	D 50	50	19.640	15.400	-4			

# PRODUCT SPECIFICATIONS

STANDARD	Nominal Designation	DIMENSION AND MASSES			
		Nominal Diameter	Nominal Cross	Unit Weight	Unit Weight
			Sectional Area		
		(mm)	(mm <sup>2</sup> )	kg/m	kg/12m
<b>SNI 2052:2017 PLAIN BAR</b>	P-6	6	28	0,222	2,664
	P-8	8	50	0,395	4,740
	P-10	10	79	0,617	7,404
	P-12	12	113	0,888	10,656
	P-14	14	154	1,208	14,496
	P-16	16	201	1,578	18,936
	P-19	19	284	2,226	26,712
	P-22	22	380	2,984	35,808
	P-25	25	491	3,853	46,236
	P-28	28	616	4,834	58,008
	P-32	32	804	6,313	75,756
	P-36	36	1018	7,990	95,880
P-40	40	1257	9,865	118,380	
P-50	50	1964	15,413	184,956	
<b>SNI 2052:2017 DEFORMED BAR</b>	S-6	6	28	0,222	2,664
	S-8	8	50	0,395	4,740
	S-10	10	79	0,617	7,404
	S-13	13	133	1,042	12,504
	S-16	16	201	1,578	18,936
	S-19	19	284	2,226	26,712
	S-22	22	380	2,984	35,808
	S-25	25	491	3,853	46,236
	S-29	29	661	5,185	62,220
	S-32	32	804	6,313	75,756
	S-36	36	1018	7,990	95,880
	S-40	40	1257	9,865	118,380
	S-50	50	1964	15,413	184,956
	S-54	54	2290	17,978	215,736
S-57	57	2552	20,031	240,372	
<b>ASTM A615/A615M- 2016</b>	10	9,50	71	0,560	6,720
	13	12,7	129	0,994	11,928
	16	15,9	199	1,552	18,624
	19	19,1	284	2,235	26,820
	22	22,2	387	3,042	36,504
	25	25,4	510	3,973	47,676
	29	28,7	645	5,060	60,720
	32	32,3	819	6,404	76,848
	36	35,8	1006	7,907	94,884
	43	43,0	1452	11,380	136,560
	57	57,3	2581	20,240	242,880
	64	63,5	3167	24,840	298,800
<b>ASTM A706/A706M- 2016</b>	10	9,50	71	0,560	6,720
	13	12,7	129	0,994	11,928
	16	15,9	199	1,552	18,624
	19	19,1	284	2,235	26,820
	22	22,2	387	3,042	36,504
	25	25,4	510	3,973	47,676
	29	28,7	645	5,060	60,720
	32	32,3	819	6,404	76,848
	36	35,8	1006	7,907	94,884
	43	43,0	1452	11,380	136,560
57	57,3	2581	20,240	242,880	
<b>JIS G3112/2010</b>	D-4	4,23	14,05	0,110	1,320
	D-5	5,29	21,98	0,173	2,076
	D-6	6,35	31,67	0,249	2,988
	D-8	7,91	49,51	0,389	4,668
	D-10	9,53	71,33	0,560	6,720
	D-13	12,70	126,70	0,995	11,940
	D-16	15,90	198,60	1,560	18,720
	D-19	19,10	286,50	2,250	27,000
	D-22	22,20	387,10	3,040	36,480
	D-25	25,40	506,70	3,980	47,760
	D-29	28,60	642,40	5,040	60,480
	D-32	31,80	794,20	6,230	74,760
	D-35	34,90	956,60	7,510	90,120
	D-38	38,10	1140,00	8,950	107,400
D-41	41,30	1340,00	10,500	126,000	
D-51	50,80	2027,00	15,900	190,800	
<b>BS 4449/2005</b>	6	6	28,3	0,222	2,664
	7	7	38,5	0,302	3,624
	8	8	50,3	0,395	4,740
	9	9	63,6	0,499	5,988
	10	10	78,5	0,617	7,404
	12	12	113	0,888	10,656
	16	16	201	1,580	18,960
	20	20	314	2,470	29,640
	25	25	491	3,850	46,200
	32	32	804	6,310	75,720
	40	40	1257	9,860	118,320
50	50	1963	15,400	184,800	

# PRODUCT SPECIFICATIONS

SPECIFICATION	GRADE	CHEMICAL COMPOSITION % (Max)								MECHANICAL PROPERTIES		
		C	Si	Mn	P	S	Ni	Cu	Ceq	Yield Strength	Tensile Strength	Min. Elongation in 200mm
SNI 2052 : 2017	Plain Bar											
	BJTP 280	-	-	-	0,050	0,050	-	-	-	min 280 max 405	min 350	11 (d ≤ 10 mm) 12 (d ≥ 12 mm)
	Deformed Bar											
	BJTS 280	-	-	-	0,050	0,050	-	-	-	min 280 max 405	min 350	11 (d ≤ 10 mm) 12 (d ≥ 13 mm)
	BJTS 420 A	0,32	0,55	1,65	0,050	0,050	-	-	0,60	min 420 max 545	min 525	9 (d ≤ 19 mm) 8 (22 ≤ d ≤ 25 mm) 7 (d ≥ 29 mm)
	BJTS 420 B	0,32	0,55	1,65	0,050	0,050	-	-	0,60	min 420 max 545	min 525	14 (d ≤ 19 mm) 12 (22 ≤ d ≤ 36 mm) 10 (d ≥ 36 mm)
	BJTS 520	0,35	0,55	1,65	0,050	0,050	-	-	0,625	min 520 max 645	min 650	7 (d ≤ 25 mm) 6 (d ≥ 29 mm)
	BJTS 550	0,35	0,55	1,65	0,050	0,050	-	-	0,625	min 550 max 675	min 687,5	7 (d ≤ 25 mm) 6 (d ≥ 29 mm)
	BJTS 700	0,35	0,55	1,65	0,050	0,050	-	-	0,625	min 700 max 825	min 805	7 (d ≤ 25 mm) 6 (d ≥ 29 mm)
	Tolerance of Carbon In Product Allowed is 0.03%											
Ceq = C + Mn/6 + Ni/40 + Cr/5 + Mo/4 + V/14												
ASTM A615/A615M-2016	Deformed Bar / Plain Bar											
	Grade 40	-	-	-	0,06	-	-	-	-	min 280	min 420	11 (d ≤ 10 mm) 12 (13 ≤ d ≤ 19 mm)
	Grade 60	-	-	-	0,06	-	-	-	-	min 420	min 620	9 (10 ≤ d ≤ 19 mm) 8 (22 ≤ d ≤ 25 mm) 7 (d ≥ 29 mm)
	Grade 75	-	-	-	0,06	-	-	-	-	min 520 max 645	min 690	7 (10 ≤ d ≤ 25 mm) 6 (d ≥ 29 mm)
	Grade 80	-	-	-	0,06	-	-	-	-	min 550	min 725	7 (10 ≤ d ≤ 25 mm) 6 (d ≥ 29 mm)
Grade 100	-	-	-	0,06	-	-	-	-	min 690	min 790	7 (10 ≤ d ≤ 25 mm) 6 (d ≥ 29 mm)	
ASTM A706/A706M-2013	Deformed Bar / Plain Bar											
	Grade 60	0,30	0,50	1,50	0,035	0,045	-	-	0,55	min 420 max 540	min 550	14 (10 ≤ d ≤ 19 mm) 12 (22 ≤ d ≤ 36 mm) 10 (d ≥ 36 mm)
Grade 80	0,30	0,50	1,50	0,035	0,045	-	-	0,55	min 550 max 675	min 690	12 (10 ≤ d ≤ 36 mm) 10 (d ≥ 36 mm)	
JIS G 3112/2010	Plain Bar											
	SR-235	-	-	-	0,050	0,050	-	-	-	min 235	min 380 max 520	20 (d < 25 mm) 22 (d ≥ 25 mm)
	SR-295	-	-	-	0,050	0,050	-	-	-	min 295	min 440 max 600	18 (d < 25 mm) 19 (d ≥ 25 mm)
	Deformed Bar											
	SD-295A	-	-	-	0,050	0,050	-	-	-	min 295	min 440 max 600	16 (d < 25 mm) 17 (d ≥ 25 mm)
	SD-295B	0,27	0,55	1,50	0,040	0,040	-	-	-	min 295 max 390	min 440	16 (d < 25 mm) 17 (d ≥ 25 mm)
	SD-345	0,27	0,55	1,60	0,040	0,040	-	-	0,50	min 345 max 440	min 490	18 (d < 25 mm) 19 (d ≥ 25 mm)
	SD-390	0,29	0,55	1,80	0,040	0,040	-	-	0,55	min 390 max 510	min 560	16 (d < 25 mm) 17 (d ≥ 25 mm)
SD-490	0,32	0,55	1,80	0,040	0,040	-	-	0,60	min 490 max 625	min 620	12 (d < 25 mm) 13 (d ≥ 25 mm)	
BS 4449/2005	Deformed Bar											
	B500A	0,24	-	-	0,055	0,055	0,014	0,85	0,52	500		2,5
	B500B	0,24	-	-	0,055	0,055	0,014	0,85	0,52	500		5,0
	B500C	0,24	-	-	0,055	0,055	0,014	0,85	0,52	500		7,5
CEV = C + Mn/6 + (Cr+Mo+V)/5 + (Ni + Cu)/15												
The tensile strength shall be either :												

## CHEMICAL COMPOSITIONS & MECHANICAL PROPERTIES OF ROLLED STEEL BARS