

## Chemical Composition (Maximum % by mass)

Cast/Product Analysis	Carbon C	Silicon Si	Manganese Mn	Phosphorus P	Sulphur S	Nitrogen N	Carbon Equivalent CEV
Cast Analysis	—	—	—	0.060	—	—	—

## Deformed Bar Designation Numbers, Nominal Weights [Masses], Nominal Dimensions and Deformation Requirements

Bar Designation No. or Nominal Diameter, $d$ (mm)	Nominal Dimensions				Deformation Requirements		
	Nominal Mass per Meter (kg/m)	Mass Tolerance (Minimum)	Nominal Cross-Section Area (mm <sup>2</sup> )	Perimeter (mm)	Maximum Average Transverse Rib Spacing (mm)	Minimum Average Transverse Rib Height (mm)	Maximum Gap (Chord of 12.5% Nominal Perimeter) (mm)
8	0.395	-6%	50	25.1	5.6	0.32	3.0
10	0.617	-6%	79	31.4	7.0	0.40	3.8
12	0.888	-6%	113	37.7	8.4	0.48	4.6
16	1.58	-6%	201	50.3	11.2	0.72	6.1
20	2.47	-6%	314	62.9	14.0	1.00	7.6
25	3.85	-6%	491	78.6	17.5	1.25	9.5
32	6.31	-6%	805	100.6	22.4	1.60	12.2

### Tensile Properties

Standard	Grade	Bar Designation No. or Nominal Diameter (mm)	Tensile Strength, MPa [psi] (min.)	Yield Strength, MPa [psi] (min.)	Elongation in 200 mm, % (min.)
ASTM A 615/A 615M	Grade 420 [60]	8 - 20	620 [90 000]	420 [60 000]	9
		25	620 [90 000]	420 [60 000]	8
		32	620 [90 000]	420 [60 000]	7

### Bend Test

Standard	Grade	Bar Designation No. or Nominal Diameter (mm)	Mandrel/Pin Diameter	Bend Angle
ASTM A 615/A 615M	Grade 420 [60]	8, 10, 12, 16	$3\frac{1}{2} d$	180°
		20, 25	$5 d$	
		32	$7 d$	