



RAWAFID

GLOBAL ENERGY, METALS & INDUSTRIAL TRADING

MINING & MINERALS PRODUCT SPECIFICATIONS

Rawafid Services and Business LLC · Sultanate of Oman

June 2026

OIL · GAS · PETROCHEMICALS · METALS · MINERALS · INDUSTRIAL SOLUTIONS

www.rawafidholding.com



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IRON ORE & MINERALS

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Steel Billet – Technical Specification

STEEL PRODUCTS

Technical Specification of Steel Billet

Chemical Composition											
Grade	%C		%Si		%Mn		%P	%S	%Cu	%Cr	%Ni
5SP	0.28	0.37	0.15	0.30	0.50	0.80	0.040	0.045	0.30	0.30	0.30
4SP	0.18	0.27	0.15	0.30	0.40	0.70	0.040	0.045	0.30	0.30	0.30
4SP-modified	0.23	0.28	0.15	0.30	0.70	0.90	0.040	0.045	0.30	0.30	0.30
3SP	0.14	0.22	0.15	0.30	0.40	0.65	0.040	0.045	0.30	0.30	0.30
3SP-modified	0.17	0.22	0.15	0.30	0.65	0.90	0.040	0.045	0.30	0.30	0.30

Dimensional & Physical Specification		
Item	Value	Remark
Size(mm)	150*150	-----
	130*130	-----
Size Tolerance (mm)	6	The difference between the sides (Measured on cold bars at least 150mm from the end of bars)
Length Tolerance (mm)	12000 ± 100	-----
Romboidity(mm)	9mm(150*150) 7mm(130*130)	Diameters difference is no more than 9 mm
Straightness	≤8mm /m Max. 80mm	Measured on cold bars at least 150mm from the end of bars



Steel Billet – Mill Test Certificate (Sample)

STEEL PRODUCTS

Mill Test Certificate													
Certificate No:		Loading Date:							Customer:				
N.P:		ORIGINAL OR DOCUMENT QUALITY CERTIFICATE							DOCUMENT TYPE: INSPECTION CERTIFICATE				
PRODUCT: BILLET		ACCORDING TO:							GREDE:		Pile No:		Row
									SPECIFICATIONS				
C%	Mn%	Si%	p%	S%	C.E%	Cu%	Ni%	Cr%	Heat No.	LENGTH (m)	Quantity No.	cross Section (mm×mm)	
0.18	0.58	0.18	0.009	0.021	0.292	0.018	0.010	0.011	031080	12	1	150×150	1
0.19	0.62	0.20	0.007	0.019	0.290	0.011	0.009	0.010	031978	12	2	150×150	2
0.18	0.59	0.21	0.039	0.022	0.294	0.008	0.025	0.011	032547	12	1	150×150	3
0.18	0.58	0.20	0.026	0.022	0.293	0.008	0.018	0.010	032621	12	29	150×150	4
0.19	0.60	0.20	0.027	0.024	0.300	0.008	0.019	0.010	032622	12	40	150×150	5
0.18	0.58	0.22	0.023	0.022	0.292	0.008	0.019	0.011	032623	12	19	150×150	6
0.18	0.60	0.21	0.024	0.019	0.295	0.009	0.017	0.010	032624	12	5	150×150	7
0.19	0.58	0.20	0.014	0.022	0.294	0.009	0.015	0.009	032625	12	13	150×150	8
0.18	0.58	0.22	0.011	0.020	0.281	0.009	0.013	0.009	032626	12	1	150×150	9
0.18	0.58	0.18	0.014	0.022	0.284	0.009	0.012	0.009	032640	12	1	150×150	10
0.17	0.63	0.23	0.015	0.023	0.286	0.008	0.024	0.009	032660	12	2	150×150	11
0.19	0.59	0.20	0.031	0.021	0.295	0.009	0.019	0.009	032675	12	4	150×150	12
0.18	0.61	0.19	0.014	0.028	0.295	0.010	0.013	0.009	032704	12	1	150×150	13
0.17	0.59	0.18	0.014	0.035	0.280	0.010	0.013	0.009	032705	12	19	150×150	14
0.18	0.58	0.21	0.014	0.027	0.286	0.009	0.006	0.008	032748	12	1	150×150	15
0.17	0.59	0.21	0.013	0.024	0.283	0.009	0.008	0.009	032749	12	3	150×150	16
0.18	0.58	0.22	0.014	0.024	0.285	0.009	0.008	0.009	032750	12	1	150×150	17
0.19	0.59	0.20	0.017	0.024	0.295	0.006	0.008	0.009	032835	12	2	150×150	18
0.19	0.61	0.22	0.022	0.027	0.298	0.006	0.009	0.009	032836	12	6	150×150	19
0.19	0.59	0.22	0.023	0.023	0.297	0.005	0.015	0.010	040083	12	1	150×150	20
0.19	0.58	0.20	0.008	0.014	0.299	0.011	0.010	0.006	041103	12	2	150×150	21
0.18	0.58	0.21	0.013	0.014	0.285	0.007	0.010	0.008	041108	12	5	150×150	22
0.20	0.61	0.23	0.006	0.012	0.308	0.009	0.006	0.008	041714	12	68	150×150	23
0.19	0.60	0.21	0.004	0.023	0.298	0.009	0.008	0.007	041753	12	12	150×150	24
0.17	0.58	0.22	0.007	0.018	0.280	0.008	0.005	0.007	041762	12	3	150×150	25
0.18	0.63	0.22	0.005	0.018	0.291	0.008	0.006	0.008	041821	12	64	150×150	26
0.19	0.63	0.22	0.007	0.017	0.303	0.008	0.006	0.008	041822	12	70	150×150	27
0.18	0.60	0.20	0.007	0.016	0.288	0.008	0.005	0.007	041823	12	72	150×150	28
0.20	0.62	0.21	0.007	0.019	0.312	0.008	0.006	0.009	041824	12	64	150×150	29
0.19	0.60	0.19	0.008	0.021	0.300	0.008	0.006	0.008	041825	12	71	150×150	30
0.19	0.60	0.19	0.008	0.022	0.299	0.008	0.006	0.009	041826	12	72	150×150	31
0.18	0.62	0.21	0.009	0.020	0.294	0.007	0.005	0.010	041827	12	42	150×150	32
0.17	0.64	0.23	0.009	0.021	0.284	0.007	0.005	0.007	041829	12	61	150×150	33
0.18	0.61	0.19	0.007	0.022	0.280	0.007	0.006	0.006	041830	12	72	150×150	34
0.18	0.62	0.20	0.009	0.019	0.293	0.007	0.008	0.008	041831	12	62	150×150	35
Prepared by:									Approved by:				
Address:													



Ribbed Rebar – Product Specifications

STEEL PRODUCTS

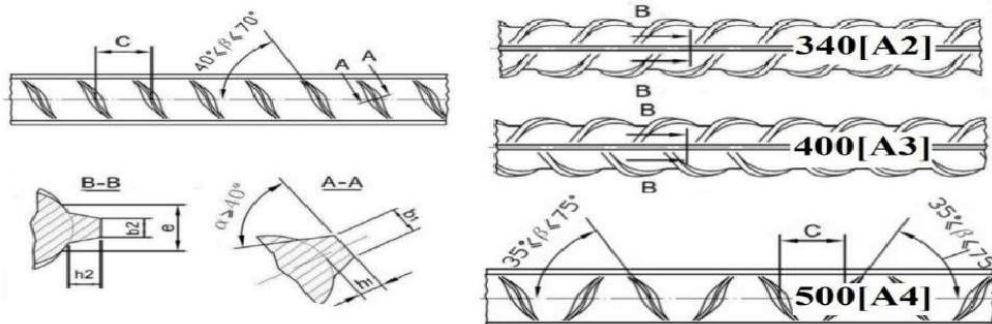
Product Specifications (Ribbed Rebar)

The Specification of the Grade 340[A2], 400[A3], 500[A4], Ribbed Rebar. Are based on the INSO 3132:2013 Standard as Described in the Following Tables.

Mass Specification											
Parameter	Nominal Diameter										
	8	10	12	14	16	18	20	22	25	28	32
Mass (kg/m)	0.395	0.616	0.888	1.21	1.58	2.00	2.47	2.98	3.85	4.83	6.31
Tolerances (%)	±7	±5	±5	±5	±5	±5	±5	±5	±4	±4	±4

Chemical Composition (Maximum % by Mass)						
Grade	Carbon [C]	Silicon [Si]	Manganese [MN]	Phosphorus [P]	Sulfur [S]	CEV
340[A2]	0.35	0.65	1.36	0.050	0.050	0.50
400[A3]	0.40	0.65	1.66	0.050	0.050	-
500[A4]	0.43	0.65	1.88	0.050	0.050	-

Mechanical Properties						
Tensile Test (Properties and Value)					Bending Test (Result and Mandrel Size)	
Grade	Min Upper Yield strength, R_{eH} (Map)	Min Tensile strength, R_m (Map)	Min R_m/R_{eH}	Elongation after break, A_5 (%)	Mandrel Size □ 16 = 3d >16 = 6d	Result
340[A2]	340	500	1.25	18		180° Bending
400[A3]	400	600		16		No Crack/ No Fracture
500[A4]	500	650		10		





Iron Ore Concentrate – Chemical Analysis

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Iron Ore Concentrate – Typical Chemical Analysis

Parameter	Unit	Typical Value
Total Iron (Fe)	%	66.0 – 67.0
FeO	%	4.5 – 5.0
SiO ₂	%	≤ 4.5
Al ₂ O ₃	%	≤ 1.5
P (Phosphorus)	%	≤ 0.05
S (Sulfur)	%	≤ 0.02
Moisture	%	≤ 10
Particle Size	Micron	80% Passing 90 µm
Recovery Rate	%	Approximately 71

Product Description

Iron Ore Concentrate produced by Iron Ore Mines Company is obtained through crushing, grinding, wet magnetic separation, and dewatering processes. The product is suitable for pelletizing plants, direct reduction (DRI), and steelmaking industries. The concentrate is characterized by high iron content, low impurities, and consistent quality.



Iron Ore Pellets – Specification

IRON ORE & MINERALS

Iron ore pellets specification

Sulphur%	Feo%	Fe tot %	Sio2 tot %	Mgo tot%	Cao tot%	Al2O3 tot%	V2O5 tot%	Tio2 tot%	Comp strt .Ave%	9-16 mm%
avg 0.003	avg 0.4	avg 65.4	avg 3.3	avg 0.78	avg 0.67	avg 0.63	avg 0.21	avg 0.29	avg 308.2	avg 94.03
max0.006	max0.7	min 65	max3.5	min 0.5	min.5	max0.8	max0.3	max0.4	270-330	min93
Sulphur%	Feo%	Fe tot %	Sio2 tot %	Mgo tot%	Cao tot%	Al2O3 tot%	V2O5 tot%	Tio2 tot%	Comp strt .Ave%	9-16 mm%
max0.006	max0.7	min 65	max3.5	min 0.5	min.5	max0.8	max0.3	max0.4	270-330	min93



Iron Ore Pellets – Inspection Report

IRON ORE & MINERALS

Certificate N°: 26103023375

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INSPECTION REPORT

Analysis:

One prepared composite sample was sent to the non-SGS laboratory. The test results reported by the laboratory are as follows:

Test Items	Test Method	Result
%Fe	ISO 9507/2597-1	66.19
%FeO	ISO 9035	17.82
%SiO ₂	ISO 2598-1	3.34
%Al ₂ O ₃	ISO 4688-1/6830	0.57
%S	ISO 4689	<0.05
%P	ISO 4687-1	<0.01

These findings are reported herein for convenience only and SGS has no liability for the subcontracted results which remain with the lab.

Size Determination:

Size determination was performed according to ISO 4701 and following table reflects our finding:

Size(mm)	Percentage (%)
-0.075	64.426
+0.075	35.574

MOISTURE DETERMINATION:

Moisture determination was performed according to ISO3087. The below table reflects our finding:

Total wet weight of cargo (WMT) as per SGS draft survey	Average moisture (%)	Total H ₂ O weight (MT)	Total cargo dry weight (DMT)
76,100.723	7.202	5,480.774	70,619.949