

RAILS

Chemical Composition and Mechanical Properties

Specification		Chemical Composition					Mechanical Properties			
		C	Si	Mn	P	S	Tensile Strength	Elongation	Test Piece	
		Range %	Range %	Range %	Max. %	Max. %	Range or Min. Kgf/mm ² (N/mm ²)	Min. %	Dia. & GL mm	
KS B 8101 & JIS E 1103	22Kg	0.45~0.65	0.40 max.	0.50~0.90	0.045	0.050	65(637) min.	10	Dia. = 14 GL=50	
KS B 8106 & JIS E 1101	37Kg	0.55~0.70	0.10~0.35	0.60~0.95	0.045	0.050	70(690) min.	9		
	50KgN	0.63~0.75	0.15~0.30	0.70~1.10	0.030	0.025	82(800) min.	10		
	60Kg									
70S										
UIC	GR. 700	All Types	0.40~0.60	0.05~0.35	0.80~1.25	0.050	0.050	69.4~84.7(680-830)	14	Dia. = 10 GL = 50
860-0	GR. 900A	All Types	0.60~0.80	0.10~0.50	0.80~1.30	0.040	0.040	89.8~105.1	10	
1988	GR. 900B	All Types	0.55~0.75	0.10~0.50	1.30~1.70	0.040	0.040	(880-1,030)		
BS : 1978		All Types	0.45~0.60	0.05~0.35	0.95~1.25	0.050	0.050	72.4(710) min.	9	Dia.=13.82 GL=5.65√So
AREA : 1988	90-114RE		0.67~0.80	0.10~0.50	0.70~1.00	0.035	0.037	-	-	
	from 115RE		0.72~0.82	0.10~0.50	0.80~1.10	0.035	0.037	-	-	-

Dimensions

Specification		Section Area	Unit Weight	Distance from Base of Rail to Neutral Axis	Moment of Inertia	Section Modulus	
						Head	Base
		cm ²	kg/m	mm	cm ⁴	cm ³	cm ³
K.S. & JIS	22Kg	28.39	22.3	41.67	339	65.2	81.35
	37Kg	47.3	37.2	58.4	952	149	163
	50KgN	64.2	50.4	71.6	1,960	242	274
	60Kg	77.5	60.8	77.8	3,090	320.2	398.7
	70S	88.5	69.5	62.22	2,120	254	340.8
UIC	54	69.34	54.43	76.2	2,346	283.3	307.87
	60	76.86	60.34	80.95	3,055	335.5	377.4
BS	75R	47.19	37.04	66.71	1,061	171.5	159
	90R	56.70	44.51	74.78	1,584.3	232.6	211.85
AREA	115RE	11.25(in ²)	114.7(Lb/Yd)	2.98(in)	65.6(in ⁴)	18.0(in ³)	22.0(in ³)
	132RE	12.95(in ²)	132.1(Lb/Yd)	3.20(in)	88.2(in ⁴)	22.5(in ³)	27.6(in ³)
IRS(India)	52	66.1	51.89	75.104	2,105.3	260.25	280.32
Tunisia	U33	59.06	46.303	67.2	1,587.9	236.3	204.1

Quality

KS B 8101, KS B 8106, JIS E 1101, JIS E 1103

* If requested by the customer, we will newly develop the other calibers than those listed above.

