

# CHEMICAL COMPOSITION OF STAINLESS STEEL TUBES & PIPES

Grade	CHEMICAL COMPOSITION %								
	C	Si	Mn	P (max.)	S (max.)	Ni	Cr	Mo	Other
TP 304	≤0.08	≤0.75	≤2.00	0.040	0.030	8.00 ~11.00	18.00 ~20.00	-	-
TP304 H	0.04 ~0.10	≤0.75	≤2.00	0.040	0.030	8.00 ~11.00	18.00 ~20.00	-	-
TP 304 L	≤0.035	≤0.75	≤2.00	0.040	0.030	8.00 ~13.00	18.00 ~20.00	-	-
TP 304 N	≤0.08	≤0.75	≤2.00	0.040	0.030	8.00 ~11.00	18.00 ~20.00	-	-N: 0.10 ~ 0.16
TP 304 LN	≤0.035	≤0.75	≤2.00	0.040	0.030	8.00 ~11.00	18.00 ~20.00	-	N: 0.10 ~ 0.16
TP 309	≤0.15	≤0.75	≤2.00	0.040	0.030	12.00 ~15.00	22.00 ~24.00	-	-
TP 310	≤0.15	≤0.75	≤2.00	0.040	0.030	19.00 ~22.00	24.00 ~26.00	-	-
TP 316	≤0.08	≤0.75	≤2.00	0.040	0.030	11.00 ~14.00	16.00 ~18.00	2.00 ~3.00	-
TP 316 H	≤0.04 ~0.10	≤0.75	≤2.00	0.040	0.030	11.00 ~14.00	16.00 ~18.00	2.00 ~3.00	-
TP 316 L	≤0.035	≤0.75	≤2.00	0.040	0.030	10.00 ~15.00	16.00 ~18.00	2.00 ~3.00	-
TP 316 N	≤0.08	≤0.75	≤2.00	0.040	0.030	11.00 ~14.00	16.00 ~18.00	2.00 ~3.00	N: 0.10 ~ 0.16
TP 316 LN	≤0.035	≤0.75	≤2.00	0.040	0.030	10.00 ~15.00	16.00 ~18.00	2.00 ~3.00	N: 0.10 ~ 0.16
TP 316 Ti	≤0.08	≤0.75	≤2.00	0.040	0.030	11.00 ~14.00	16.00 ~18.00	2.00 ~3.00	Ti: 5xC% ~ 0.75
TP 317	≤0.08	≤0.75	≤2.00	0.040	0.030	11.00 ~14.00	18.00 ~20.00	2.00 ~3.00	-
TP 321	≤0.08	≤0.75	≤2.00	0.040	0.030	9.00 ~13.00	17.00 ~20.00	-	Ti: 5xC% ~ 0.70B
TP 321 H	≤0.04 ~0.10	≤0.75	≤2.00	0.040	0.030	9.00 ~13.00	17.00 ~20.00	-	Ti: 4xC% ~ 0.60
TP 347	≤0.08	≤0.75	≤2.00	0.040	0.030	9.00 ~13.00	17.00 ~20.00	-	Nb + Ta: 10xC% ~ 1.00
TP 347 H	≤0.04 ~0.10	≤0.75	≤2.00	0.040	0.030	9.00 ~13.00	17.00 ~20.00	-	Nb + Ta 8xC% ~ 1.0
TP 329	≤0.08	≤0.75	≤1.00	0.040	0.030	2.50 ~5.00	23.00 ~28.00	1.00 ~2.00	-
TP 405	≤0.08	≤0.75	≤1.00	0.040	0.030	≤0.50	11.50 ~13.50	-	Al: 0.10 ~ 0.30
TP 409	≤0.08	≤1.00	≤1.00	0.045	0.045	≤0.50	10.50 ~11.75	-	Ti: 6xC% ~ 0.75
TP 410	≤0.15	≤0.75	≤1.00	0.040	0.030	≤0.50	11.50 ~13.50	-	-
TP 429	≤0.12	≤0.75	≤1.00	0.040	0.030	≤0.50	14.00 ~16.00	-	-
TP 430	≤0.12	≤0.75	≤1.00	0.040	0.030	≤0.50	16.00 ~18.00	-	-
TP 443	≤0.20	≤0.75	≤1.00	0.040	0.030	≤0.50	18.00 ~23.10	-	Cu: 0.90 ~ 1.25
TP 446	≤0.20	≤1.00	≤1.50	0.040	0.030	≤0.50	23.00 ~30.00	-	N: 0.10 ~ 0.25
TP XM-8	≤0.07	≤0.75	≤1.00	0.040	0.030	≤0.50	17.00 ~19.00	-	Al: ≤0.15 Ti: 2xC% ~ 1.10