

# KOALSKI HEAT TREATING CO.

## Hardness Reference Chart

C	A	D	15N	30N	HV	HK	HB	Tensile
150 kgf diamond	60 kgf diamond	100 kgf diamond	15 kgf diamond	30 kgf diamond	Vickers Scale	Knoop >500gf	Brinell 10/1/3000	1000 lbs./sq in
68	85.6	76.9	93.2	84.4	940	920	-	-
67	85.0	76.1	92.9	83.6	900	895	-	-
66	84.5	75.4	92.5	82.8	865	870	-	-
65	83.9	74.5	92.2	81.9	832	846	739	-
64	83.4	73.8	91.8	81.1	800	822	722	-
63	82.8	73.0	91.4	80.1	772	799	705	-
62	82.3	72.2	91.1	79.3	746	776	688	-
61	81.8	71.5	90.7	78.4	720	754	670	-
60	81.2	70.7	90.2	77.5	697	732	654	-
59	80.7	69.9	89.8	76.6	674	710	634	351
58	80.1	69.2	89.3	75.7	653	690	615	338
57	79.6	68.5	88.9	74.8	633	670	595	325
56	79.0	67.7	88.3	73.9	613	650	577	313
55	78.5	66.9	87.9	73.0	595	630	560	301
54	78.0	66.1	87.4	72.0	577	612	543	292
53	77.4	65.4	86.9	71.2	560	594	525	283
52	76.8	64.6	86.4	70.2	544	576	512	273
51	76.3	63.8	85.9	69.4	528	558	496	264
50	75.9	63.1	85.5	68.5	513	542	481	255
49	75.2	62.1	85.0	67.6	498	526	469	246
48	74.7	61.4	84.5	66.7	484	510	455	237
47	74.1	60.8	83.9	65.8	471	495	443	229
46	73.6	60.0	83.5	64.8	458	480	432	221
45	73.1	59.2	83.0	64.0	446	466	421	215
44	72.5	58.5	82.5	63.1	434	452	409	208
43	72.0	57.7	82.0	62.2	423	438	400	201
42	71.5	56.9	81.5	61.3	412	426	390	195
41	70.9	56.2	80.9	60.4	402	414	381	188
40	70.4	55.4	80.4	59.5	392	402	371	182
39	69.9	54.6	79.9	58.6	382	391	362	177
38	69.4	53.8	79.4	57.7	372	380	353	171
37	68.9	53.1	78.8	56.8	363	370	344	166
36	68.4	52.3	78.3	55.9	354	360	336	161
35	67.9	51.5	77.7	55.0	345	351	327	156
34	67.4	50.8	77.2	54.2	336	342	319	152
33	66.8	50.0	76.6	53.3	327	334	311	149
32	66.3	49.2	76.1	52.1	318	326	301	146
31	65.8	48.4	75.6	51.3	310	318	294	141
30	65.3	47.7	75.0	50.4	302	311	286	138
29	64.8	47.0	74.5	49.5	294	304	279	135
28	64.3	46.1	73.9	48.6	286	297	271	131
27	63.8	45.2	73.3	47.7	279	290	264	128
26	63.3	44.6	72.8	46.8	272	284	258	125
25	62.8	43.8	72.2	45.9	266	278	253	123
24	62.4	43.1	71.6	45.0	260	272	247	119
23	62.0	42.1	71.0	44.0	254	266	243	117
22	61.5	41.6	70.5	43.2	248	261	237	115
21	61.0	40.9	69.9	42.3	243	256	231	112
20	60.5	40.1	69.4	41.5	238	251	226	110

The hardness values are for reference only and are borrowed from ASTM standards

CLEVELAND, OH

888-KHT-HEAT



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