

WEAR TEST DATA FOR SELECTED ALLOYS

ALLOY	HOT HARDNESS, DPH, (KG/MM ²) TEST TEMPERATURE, °F					THRESHOLD GALLING STRESS THRESHOLD STRESS KSI TEST ALLOY PIN AGAINST THESE BLOCK				ABRASIVE WEAR RESISTANCE (METAL TO MINERALS) DRY SAND RUBBER WHEEL TEST	ADHESIVE WEAR RESISTANCE (METAL TO METAL WEAR) VOLUME LOSS (MM ²) UNDER THE FOLLOWING CONDITIONS			
	ROOM TEMP.	800°F/427°C	1000°F/538°C	1200°F/649°C	1400°F/760°C	1020 STEEL	316 STAINLESS STEEL	C-276	PMA#6		VOLUME LOSS(MM ³)	90LB. LOAD	150LB. LOAD	210LB. LOAD
VERSAIloy® #40	525	440	355	215	90	-	-	-	-	22	0.13	0.21	0.29	0.42
PMA #6	390	300	275	260	185	36	18	9	>72	36	1.19	2.57	11.38	18.80
VERSAIloy® #50	530	440	375	230	95	18	9	18	36	12	0.20	0.30	0.30	0.40
PMA #12	435	345	325	285	245	36	18	-	>72	32	0.90	2.39	-	18.40
VERSAIloy® #60	585	555	440	250	115	18	18	9	18	11	0.11	0.15	0.18	0.27
PMA #1	620	510	465	390	230	18	18	-	>72	52	0.61	0.61	0.66	0.82
VERSAIloy® "C"	195	190	185	170	145	18	18	9	18	105	0.30	0.40	2.30	-
PMA #21	285	130	135	140	110	18	18	-	>72	86	2.50	5.20	10.30	14.50
PMA #800	725	660	620	485	310	>72	45	27	>72	35	1.25	1.67	1.92	2.07
D-2 TOOL STEEL	-	-	-	-	-	-	-	-	-	36	-	-	-	-

MEASURED WITH KENTRON UNIT, 1590 GM LOAD WITH 136° DIAMOND INDENTOR

PINS MACHINED FROM UNDILUTED GTA WELD METAL ROTATED ONE REVOLUTION

TESTED FOR 2000 REVOLUTIONS @ LOAD OF 30 LBS. USING 9" DIAMETER RUBBER WHEEL AND DRY SAND

TEST ALLOY SPECIMEN AGAINST CASE HARDENED SAE 4620 STEEL RING ROTATED @ 80 RPM FOR A TOTAL SLIDING DISTANCE OF 2.2 X 10³ MM