



MODERN ABRASIVE CORP.

Catalog
2018
Edition 1

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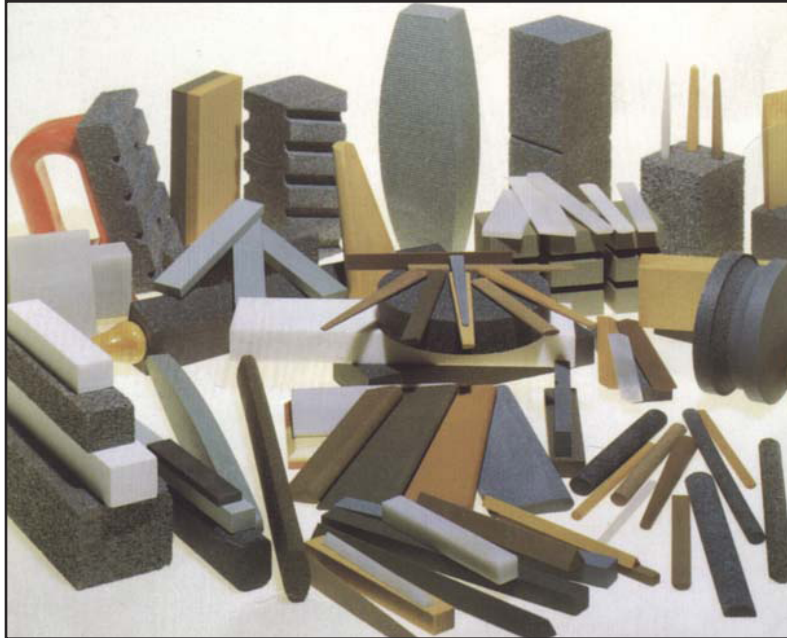


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MAXIMUM OPERATING SPEEDS (RPM) FOR MOUNTED POINTS*

CONDENSED OPERATING RULES FOR MOUNTED POINTS

Despite their small size, Mounted Wheels should be used with all of the safety precautions recommended for other types of abrasive grinding wheels. Each wheel should be inspected before use to make sure that the mandrel has not been bent or the wheel damaged. When mounting, the mandrel should be inserted into the collet as far as possible. The pressure exerted in the grinding operation should not be excessive.

Mounted Wheels should be operated with adequate speed to get efficient grinding action. The factors that affect the maximum safe operating speed of a particular size wheel include:

- 1) the size and shape of the wheel
- 2) the overhang (distance that the wheel is extended from the collet)
- 3) the diameter of the mandrel on which the wheel is mounted
- 4) the condition of the grinder and its collet

Refer to these tables and/or the American Safety code for maximum operating speeds. (ANSI B7.1) DO NOT EXCEED THE SPEED INDICATED!

The use of abrasive wheels can cause nuisance dust. Take normal precautions to avoid exposure. WEAR FACE PROTECTION AT ALL TIMES!

It is a good practice when holding hand grinders to hold the grinder down and away from the operator until full operating speed is attained and it is determined that the mounted wheel is properly mounted and running smoothly. DO NOT OPERATE A MOUNTED WHEEL WHICH IS NOT PROPERLY MOUNTED AND RUNNING TRUE! If excessive vibration is felt, stop the grinder at once and do not resume grinding until the cause is found and corrected.

MAXIMUM OPERATING SPEEDS (RPM) FOR 1/4" MANDRELS GROUP "A" AND (SELECTED) GROUP "B" SHAPES

SHAPE NO.	WHEEL SIZE DIAM. X THK.	1/2" OVERHANG & THREADED MANDRELS	1" OVERHANG		
			1"	1-1/2"	2"
A1	3/4 x 2-1/2	19800	16500	13120	10650
A2	1 x 1-1/4	38200	32620	25500	20620
A3	1 x 2-3/4	16100	13080	10730	8720
A4	1-1/4 x 1-1/4	30560	24750	20250	16120
A5	3/4 x 1-1/8	45000	33750	27000	21000
A6	3/4 x 1-1/8	39000	29700	24000	18970
A11	7/8 x 2	19860	15100	12000	9810
A12	11/16 x 1-1/4	48000	35250	27370	21750
A13	1-1/8 x 1-1/8	33950	32250	25500	20620
A14	11/16 x 7/8	55560	40500	30750	24370
A15	1/4 x 1-1/16	72750	47620	34500	26250
A21	1 x 1	34500	26250	21000	17250
A22	3/4 x 5/8	50930	40500	30750	24370
A23	3/4 x 1	39370	30370	24370	19500
A24	1/4 x 3/4	76500	49500	36370	27000
A25	1 x 1	35620	27370	22120	18000
A26	5/8 x 5/8	61120	46500	35250	27750
A31	1-3/8 x 1	27780	26250	21000	17250
A32	1 x 5/8	38200	38200	30000	24000
A33	1 x 1/2	38200	38200	30000	24000
A34	1-1/2 x 3/8	25470	25470	25470	21970
A35	1 x 3/8	38200	38200	31500	25500
A36	1-5/8 x 3/8	23520	23520	23520	21750
A37	1-1/4 x 1/4	30560	30560	30560	28120
A38	1 x 1	34500	26250	21000	17020
A39	3/4 x 3/4	47250	35250	27750	22120
A40	3/4 x 3/4	47250	35250	27750	22120
B41	5/8 x 5/8	61120	46500	35250	27370
B42	1/2 x 3/4	61120	46500	35250	27370
B51	7/16 x 3/4	81000	54370	42000	33000
B52	3/8 x 3/4	81000	54370	42000	33000
B61	3/4 x 5/16	50930	50930	38100	29020
B62	1/2 x 3/8	71250	47620	35020	27000
B91	1/2 x 5/8	61500	42000	31500	24000
B101	5/8 x 11/16	61120	46500	35250	27370
B102	5/8 x 1/2	61120	54370	42000	33000
B111	7/16 x 11/16	66000	46500	35250	27370
B112	3/8 x 1/2	81000	54370	42000	33000
B121	1/2 x 1/2	76390	54370	42000	33000
B131	1/2 x 1/2	61500	42000	31500	24000
B132	3/8 x 1/2	81000	54370	42000	33000

MAXIMUM OPERATING SPEEDS (RPM) FOR 1/4" MANDRELS GROUP "W" (PLAIN SHAPES)

SHAPE NO.	WHEEL SIZE DIAM. X THK.	1/2" OVERHANG & THREADED MANDRELS	1" OVERHANG		
			1"	1-1/2"	2"
W170	3/8 x 1/2	81000	54370	42000	33000
W175	3/8 x 3/8	71250	47620	35020	27000
W176	3/8 x 1/2	81000	54370	42000	33000
W177	3/8 x 3/4	66000	46500	32250	27370
W178	3/8 x 1	55200	40500	30000	23250
W179	3/8 x 1-1/4	45750	33750	25720	19720
W183	1/2 x 1/4	76390	54750	40500	31120
W184	1/2 x 3/8	71250	47620	35020	27000
W185	1/2 x 1/2	61500	42000	31500	24000
W186	1/2 x 3/4	51000	36370	27750	21220
W187	1/2 x 1	40500	30000	24000	18750
W188	1/2 x 1-1/2	30370	24000	18900	15000
W189	1/2 x 2	24000	18750	15000	12150
W192	5/8 x 1/4	61120	51750	38400	29770
W193	5/8 x 3/8	61120	45000	33370	25870
W194	5/8 x 1/2	56400	39750	29400	22720
W195	5/8 x 3/4	46500	32400	24900	19720
W196	5/8 x 1	35250	27000	21300	16870
W197	5/8 x 2	21000	16500	12900	10870
W198	5/8 x 2-1/2	16500	12900	10870	8700
W201	3/4 x 1/4	50930	50930	38100	29020
W202	3/4 x 3/8	50930	44100	32400	25120
W203	3/4 x 1/2	50930	36370	27750	21750
W204	3/4 x 3/4	42750	30750	23250	18000
W205	3/4 x 1	34500	25870	19500	15000
W206	3/4 x 1-1/4	28720	21520	17020	13500
W207	3/4 x 1-1/2	24000	18520	14620	12000
W208	3/4 x 2	18750	15370	12000	9900
W209	3/4 x 2-1/2	15000	12150	10500	8400
W211	7/8 x 1/8	43650	43650	42900	33000
W212	7/8 x 1/4	43650	43650	35100	27600
W213	7/8 x 3/8	43650	40870	29400	23400
W214	15/16 x 1/4	38200	38200	33750	26250
W215	1 x 1/8	38200	38200	38200	33750
W216	1 x 1/4	38200	38200	33750	26250
W217	1 x 3/8	38200	38200	28500	22500
W218	1 x 1/2	38200	32770	24900	19500
W219	1 x 3/4	35100	24520	18750	15000
W220	1 x 1	25500	19120	15750	12370
W221	1 x 1-1/2	19120	14620	12000	10500
W222	1 x 2	15900	12370	9750	8620
W223	1 x 2-1/2	12370	9900	8620	6900
W224	1 x 3	12940	6600	5050	4700
W225	1-1/4 x 1/4	30560	30560	30560	24000
W226	1-1/4 x 3/8	30560	30560	26250	20100
W227	1-1/4 x 1/2	30560	29620	22650	18000
W228	1-1/4 x 3/4	30520	22500	17850	14250
W229	1-1/4 x 1	24000	18750	15370	12000
W230	1-1/4 x 1-1/4	20400	15900	12750	10500
W231	1-1/4 x 1-1/2	17620	13500	10650	9000
W232	1-1/4 x 2	14250	10650	9000	7500
W235	1-1/2 x 1/4	25470	25470	25470	22720
W236	1-1/2 x 1/2	25470	25470	21750	17250
W237	1-1/2 x 1	22500	17620	13270	10870
W238	1-1/2 x 1-1/2	15600	12000	9750	8250
W239	1-1/2 x 2	12750	9900	8000	6400
W241	1-1/2 x 3	12750	6600	5050	4700
W242	2 x 1	19100	15950	11750	10000
W243	2 x 1-1/2	14500	12750	9800	7800
W244	2 x 2	11750	10500	7500	6200

MAXIMUM OPERATING SPEEDS (RPM) FOR 3/8" MANDRELS GROUP "W" (SELECTED LARGER PLAIN SHAPES)

W223	1 x 2-1/2	24740	19800	17240	13800
W231	1-1/4 x 1-1/2	30560	27000	21300	18000
W232	1-1/4 x 2	28500	21300	18000	15000
W238	1-1/2 x 1-1/2	25470	24000	19500	16500
W239	1-1/2 x 2	25470	19800	16000	12800
W240	1-1/2 x 2-1/2	21000	16800	13600	11000
W241	1-1/2 x 3	18000	14500	12000	9600
W242	2 x 1	19100	19100	19100	19100
W243	2 x 1-1/2	19100	19100	19100	15600
W244	2 x 2	19100	19100	15000	12400
W245	2 x 2-1/2	19100	14500	12800	10600
W246	2 x 3	16500	13500	11200	9200

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MAXIMUM OPERATING SPEEDS (RPM) FOR MOUNTED POINTS (CONTINUED)*

**MAXIMUM OPERATING SPEEDS (RPM) FOR 1/8" MANDRELS
GROUP "B" SHAPES**

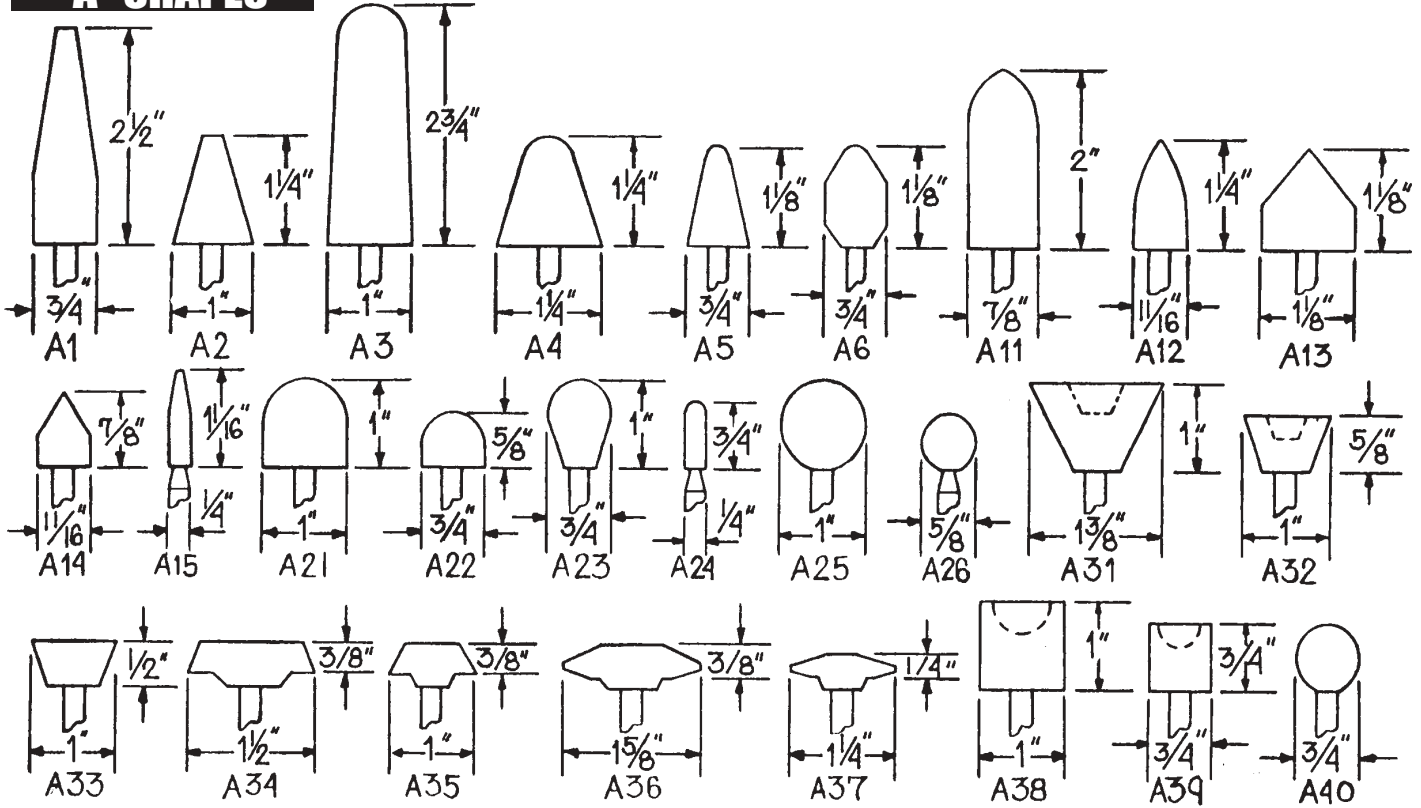
SHAPE NO.	WHEEL SIZE DIAM. X THK.	OVERHANG			
		1/2" & THREADED MANDRELS	1"	1-1/2"	2"
B41	5/8 x 5/8	33750	23250	17620	13650
B42	1/2 x 3/4	33750	23250	17620	13650
B43	1/4 x 5/16	81370	51000	34120	24000
B44	7/32 x 3/8	68400	42370	28870	20850
B45	3/16 x 5/16	104250	61870	44620	30900
B46	1/8 x 5/16	105000	64500	46650	32400
B47	1/8 x 5/32	105000	64500	46650	32400
B51	7/16 x 3/4	45370	28500	21000	15900
B52	3/8 x 3/4	45370	28500	21000	15900
B53	1/4 x 5/8	60000	38020	26250	18750
B54	1/4 x 1/2	60000	38020	26250	18750
B55	1/8 x 1/4	105000	64500	46650	32400
B61	3/4 x 5/16	38250	24370	17400	13270
B62	1/2 x 3/8	41020	26400	19500	15000
B63	1/4 x 3/16	92400	57370	39370	27900
B64	1/4 x 1/16	105000	64500	46650	32400
B65	1/8 x 1/8	105000	64500	46650	32400
B70	3/4 x 1/8	50930	41250	27750	20400
B71	5/8 x 1/8	61120	48000	31500	22650
B72	1/2 x 1/8	73500	43650	29100	20770
B73	1/2 x 1/8	73500	43650	29100	20770
B74	7/32 x 3/32	105000	64500	46650	32400
B81	3/4 x 3/16	50930	41250	27750	20400
B82	1/2 x 1/4	76390	51000	34120	24000
B83	3/8 x 3/16	87600	53250	35250	24750
B84	5/16 x 3/16	105000	64500	46650	32400
B90	1/2 x 1/2	34500	22500	16870	13120
B91	1/2 x 5/8	34500	22500	16870	13120
B92	1/4 x 1/4	81370	51000	34120	24000
B93	3/16 x 3/16	105000	64500	46650	32400
B94	11/64 x 3/32	105000	64500	46650	32400
B95	1/8 x 3/16	105000	64500	46650	32400
B96	1/8 x 1/4	105000	64500	46650	32400
B97	1/8 x 3/8	105000	64500	46650	32400
B98	3/32 x 1/4	105000	64500	46650	32400
B101	5/8 x 11/16	33750	23250	17620	13650
B102	5/8 x 1/2	45370	28500	21000	15900
B103	5/8 x 1/4	61120	41250	27750	20400
B104	5/16 x 3/8	68400	42370	28870	20850
B105	1/4 x 1/4	104250	61870	44620	30900
B106	1/8 x 7/64	105000	64500	46650	32400
B111	7/16 x 11/16	33750	23250	17620	13650
B112	3/8 x 1/2	45370	28500	21000	15900
B113	1/4 x 1/4	81370	51000	34120	24000
B114	7/32 x 3/8	68400	42370	28870	20850
B115	3/32 x 1/8	105000	64500	46650	32400
B121	1/2 x 1/2	45370	28500	21000	15900
B122	3/8 x 3/8	61650	37720	27000	19870
B123	3/16 x 3/16	104250	61820	44620	30900
B124	1/8 x 1/8	105000	64500	46650	32400
B125	1/4 x 1/4	61650	37720	27000	19870
B131	1/2 x 1/2	34500	22500	16870	13120
B132	3/8 x 1/2	45370	28500	21000	15900
B133	3/8 x 3/8	54000	33000	24150	18000
B134	5/16 x 3/8	61650	37720	27000	19870
B135	1/4 x 1/2	60000	38020	26250	18750
B136	1/4 x 5/16	77250	45920	30900	22500

**MAXIMUM OPERATING SPEEDS (RPM) FOR 1/8" MANDRELS
GROUP "W" SHAPES**

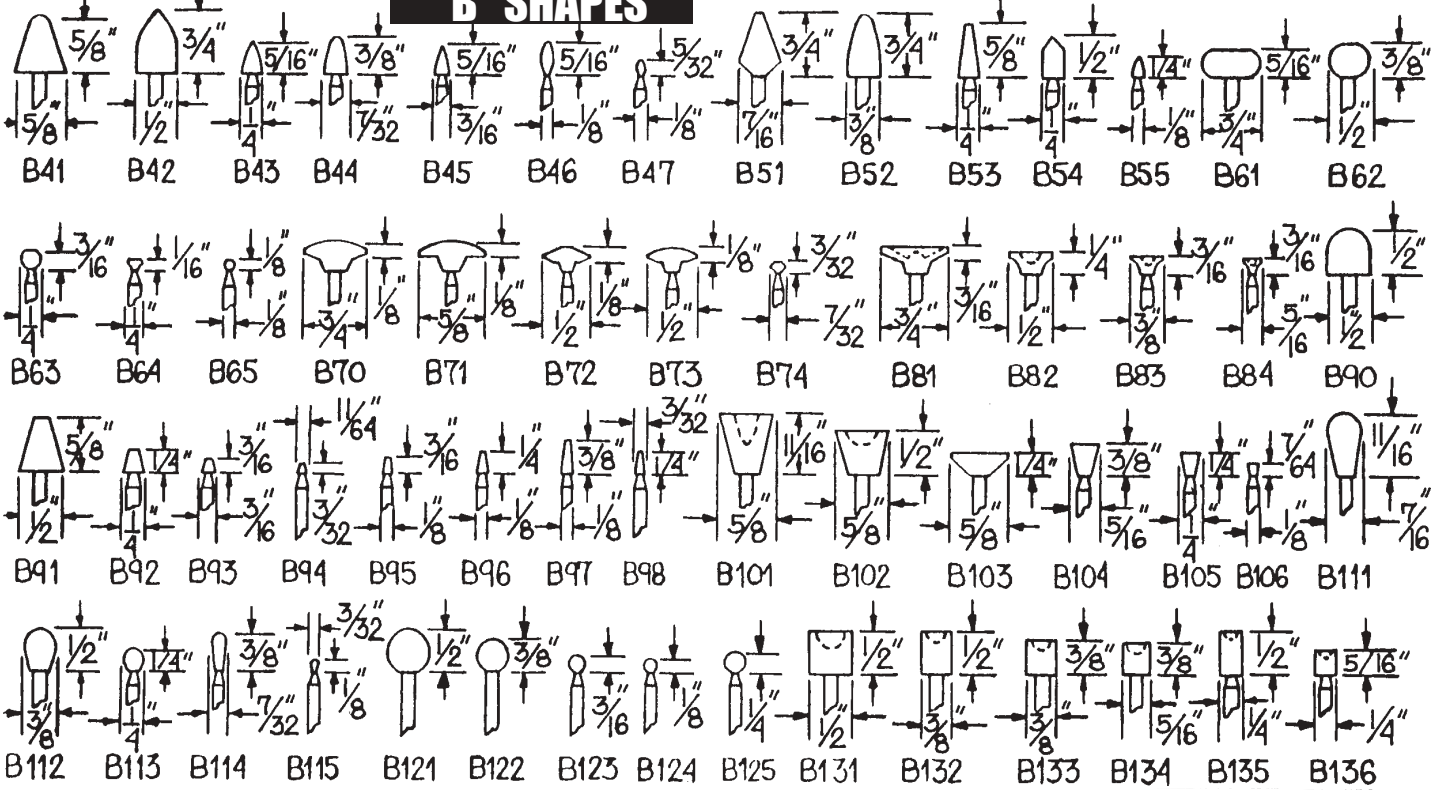
SHAPE NO.	WHEEL SIZE DIAM. X THK.	OVERHANG			
		1/2" & THREADED MANDRELS	1"	1-1/2"	2"
W141	3/32 x 5/32	105000	64500	46650	32400
W142	3/32 x 1/4	105000	64500	46650	32400
W143	1/8 x 1/8	105000	64500	46650	32400
W144	1/8 x 1/4	105000	64500	46650	32400
W145	1/8 x 3/8	105000	64500	46650	32400
W146	1/8 x 1/2	105000	64500	46650	32400
W149	5/32 x 1/4	105000	64500	46650	32400
W151	3/16 x 1/8	105000	64500	46650	32400
W152	3/16 x 1/4	105000	64500	46650	32400
W153	3/16 x 3/8	80850	52500	37500	26250
W154	3/16 x 1/2	70500	45600	31500	21970
W157	1/4 x 1/16	123000	65625	47770	33150
W158	1/4 x 1/8	105000	64500	46650	32400
W159	1/4 x 3/16	92400	57370	39370	27900
W160	1/4 x 1/4	81370	51000	34120	24000
W161	1/4 x 5/16	77250	45970	30900	22500
W162	1/4 x 3/8	68400	42370	28870	20850
W163	1/4 x 1/2	60000	38020	26250	18750
W164	1/4 x 3/4	45900	30000	21750	15900
W165	5/16 x 1/16	107400	62470	41250	29250
W166	5/16 x 1/8	96970	57000	35620	25120
W167	5/16 x 1/4	75000	45750	31120	22500
W168	5/16 x 5/16	68400	41770	28650	21000
W169	5/16 x 3/8	61650	37720	27000	19870
W170	5/16 x 1/2	52500	33000	23020	16650
W171	5/16 x 3/4	37120	25500	18750	14620
W172	3/8 x 1/16	99370	59250	41020	29250
W173	3/8 x 1/8	87600	53250	35250	24750
W174	3/8 x 1/4	69000	41250	27750	20400
W175	3/8 x 3/8	54000	33000	24150	18000
W176	3/8 x 1/2	45370	28500	21000	15900
W177	3/8 x 3/4	33750	23250	17620	13650
W178	3/8 x 1	26250	18750	14250	10870
W181	1/2 x 1/16	76390	55500	36750	25500
W182	1/2 x 1/8	73500	43650	29100	20770
W183	1/2 x 1/4	51750	31870	22500	17250
W184	1/2 x 3/8	41020	26400	19500	15000
W185	1/2 x 1/2	34500	22500	16870	13120
W186	1/2 x 3/4	26250	17400	12750	9750
W187	1/2 x 1	20620	13870	10120	7870
W190	5/8 x 1/16	61120	48000	31500	22650
W191	5/8 x 1/8	58870	34500	25120	18900
W192	5/8 x 1/4	43120	27370	19870	15220
W193	5/8 x 3/8	32250	23020	16500	12520
W194	5/8 x 1/2	29400	19120	13500	10500
W195	5/8 x 3/4	22120	14250	10120	7650
W196	5/8 x 1	17620	11620	8100	6150
W199	3/4 x 1/16	50930	44770	30000	21750
W200	3/4 x 1/8	50930	33520	23850	17850
W201	3/4 x 1/4	38250	24370	17400	13270
W202	3/4 x 3/8	30600	19500	13500	10120
W203	3/4 x 1/2	25500	15900	10870	8250
W204	3/4 x 3/4	18900	12000	8400	6220
W210	7/8 x 1/16	43650	35250	25720	18900
W211	7/8 x 1/8	43650	27900	20400	15820
W212	7/8 x 1/4	33750	20400	14400	11020
W213	7/8 x 3/8	27000	16870	11250	8250
W214	15/16 x 1/4	30520	18600	12750	9520
W215	1 x 1/8	38200	24900	18800	13870
W216	1 x 1/4	30520	18600	12750	9520

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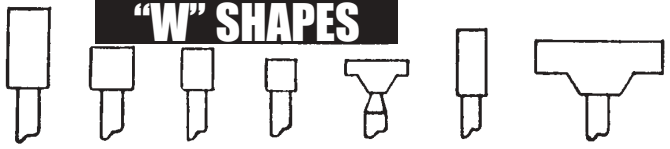
"A" SHAPES



"B" SHAPES



"W" SHAPES



"W" SHAPE SIZES ARE SHOWN ON THE FOLLOWING UPC CHART (SEE PAGE 7)

GENERAL PURPOSE MOUNTED POINTS

THESE MEDIUM GRIT MOUNTED POINTS ARE AVAILABLE IN A CHOICE OF THREE COLORS. THE COLORS ARE AN INDICATION OF THE WHEELS RELATIVE HARDNESS.*

WHITE: SOFT TO MEDIUM **BURNT-ORANGE:** MEDIUM TO HARD **BLUE-GRAY:** HARD TO VERYHARD

“A” SHAPES ARE MOUNTED ON 1/4" X 1 1/2" SHANKS
 “B” SHAPES ARE MOUNTED ON 1/8" X 1 1/2" SHANKS

25 PIECE MINIMUM PER ITEM

PRICES ARE PER PIECE

Shape	UPC # 691019-()			Price
	White	Burnt Orange	Blue-Gray	
A1	00005	00010	00015	\$3.84
A2	00020	00025	00030	\$2.32
A3	00035	00040	00045	\$4.12
A4	00050	00055	00060	\$2.32
A5	00065	00070	00075	\$2.20
A6	00080	00085	00090	\$2.20
A11	00095	00100	00105	\$2.84
A12	00110	00115	00120	\$2.20
A13	00125	00130	00135	\$2.62
A14	00140	00145	00150	\$1.66
A15	00155	00160	00165	\$2.12
A21	00170	00175	00180	\$1.82
A22	00185	00190	00195	\$1.60
A23	00200	00205	00210	\$1.66
A24	00215	00220	00225	\$1.52
A25	00230	00235	00240	\$1.82
A26	00245	00250	00255	\$1.60
A31	00260	00265	00270	\$2.20
A32	00275	00280	00285	\$1.66
A33	00290	00295	00300	\$1.60
A34	00305	00310	00315	\$1.92
A35	00320	00325	00330	\$1.60
A36	00335	00340	00345	\$2.20
A37	00350	00355	00360	\$1.66
A38	00365	00370	00375	\$1.52
A39	00380	00385	00390	\$1.28
A40	00395	00400	00405	\$1.60
B41	00410	00415	00420	\$1.60
B42	00425	00430	00435	\$1.52
B43	00440	00445	00450	\$1.42
B44	00455	00460	00465	\$1.42
B45	00470	00475	00480	\$1.42
B46	00485	00490	00495	\$1.42
B47	00500	00505	00510	\$1.28
B51	00515	00520	00525	\$1.52
B52	00530	00535	00540	\$1.52
B53	00545	00550	00555	\$1.52
B54	00560	00565	00570	\$1.42
B55	00575	00580	00585	\$1.28
B61	00590	00595	00600	\$1.52
B62	00605	00610	00615	\$1.42
B63	00620	00625	00630	\$1.28

Shape	UPC # 691019-()			Price
	White	Burnt Orange	Blue-Gray	
B64	00635	00640	00645	\$1.28
B65	00650	00655	00660	\$1.28
B70	00665	00670	00675	\$1.42
B71	00680	00685	00690	\$1.42
B72	00695	00700	00705	\$1.28
B73	00710	00715	00720	\$1.28
B74	00725	00730	00735	\$1.28
B81	00740	00745	00750	\$1.42
B82	00755	00760	00765	\$1.28
B83	00770	00775	00780	\$1.28
B84	00785	00790	00795	\$1.28
B90	00800	00805	00810	\$1.42
B91	00815	00820	00825	\$1.52
B92	00830	00835	00840	\$1.28
B93	00845	00850	00855	\$1.28
B94	00860	00865	00870	\$1.28
B95	00875	00880	00885	\$1.28
B96	00890	00895	00900	\$1.28
B97	00905	00910	00915	\$1.42
B98	00920	00925	00930	\$1.28
B101	00935	00940	00945	\$1.60
B102	00950	00955	00960	\$1.52
B103	00965	00970	00975	\$1.42
B104	00980	00985	00990	\$1.42
B105	00995	01000	01005	\$1.28
B106	01010	01015	01020	\$1.28
B111	01025	01030	01035	\$1.52
B112	01040	01045	01050	\$1.42
B113	01055	01060	01065	\$1.28
B114	01070	01075	01080	\$1.42
B115	01085	01090	01095	\$1.28
B121	01100	01105	01110	\$1.42
B122	01115	01120	01125	\$1.42
B123	01130	01135	01140	\$1.28
B124	01145	01150	01155	\$1.28
B125	01160	01165	01170	\$1.32
B131	01175	01180	01185	\$1.10
B132	01190	01195	01200	\$1.10
B133	01205	01210	01215	\$1.10
B134	01220	01225	01230	\$1.10
B135	01235	01240	01245	\$1.10
B136	01250	01255	01260	\$1.10

*These wheels are not intended to be grade specific (see pg. 9).
 The end user may not always receive a wheel of the same grit size and hardness from one order to the next.

UPC # 691019-()						UPC # 691019-()						UPC # 691019-()					
Shape	Size DIAxTHK	White	Burnt Orange	Blue- Gray	Price	Shape	Size DIAxTHK	White	Burnt Orange	Blue- Gray	Price	Shape	Size DIA x THK	White	Burnt Orange	Blue- Gray	Price
W141-D1	3/32 x 5/32	01265	01270	01275	1.00	W182-D1	1/2 x 1/8	01835	01840	01845	1.00	W209-D2	3/4 x 2-1/2	02405	02410	02415	3.12
W142-D1	3/32 x 1/4	01280	01285	01290	1.00	W183-D1	1/2 x 1/4	01850	01855	01860	1.00	W210-D1	7/8 x 1/16	02420	02425	02430	1.16
W143-D1	1/8 x 1/8	01295	01300	01305	1.00	W184-D1	1/2 x 3/8	01865	01870	01875	1.10	W211-D1	7/8 x 1/8	02435	02440	02445	1.16
W144-D1	1/8 x 1/4	01310	01315	01320	1.00	W184-D2	1/2 x 3/8	01880	01885	01890	1.10	W212-D1	7/8 x 1/4	02450	02455	02460	1.16
W145-D1	1/8 x 3/8	01325	01330	01335	1.10	W185-D1	1/2 x 1/2	01895	01900	01905	1.10	W212-D2	7/8 x 1/4	02465	02470	02475	1.28
W146-D1	1/8 x 1/2	01340	01345	01350	1.10	W185-D2	1/2 x 1/2	01910	01915	01920	1.10	W213-D1	7/8 x 3/8	02480	02485	02490	1.28
W149-D1	5/32 x 1/4	01355	01360	01365	1.10	W186-D1	1/2 x 3/4	01925	01930	01935	1.16	W213-D2	7/8 x 3/8	02495	02500	02505	1.28
W151-D1	3/16 x 1/8	01370	01375	01380	1.00	W186-D2	1/2 x 3/4	01940	01945	01950	1.16	W214-D1	15/16 x 1/4	02510	02515	02520	1.16
W152-D1	3/16 x 1/4	01385	01390	01395	1.00	W187-D1	1/2 x 1	01955	01960	01965	1.28	W214-D2	15/16 x 1/4	02525	02530	02535	1.16
W153-D1	3/16 x 3/8	01400	01405	01410	1.10	W187-D2	1/2 x 1	01970	01975	01980	1.28	W215-D1	1 x 1/8	02540	02545	02550	1.16
W154-D1	3/16 x 1/2	01415	01420	01425	1.10	W188-D2	1/2 x 1-1/2	01985	01990	01995	1.92	W215-D2	1 x 1/8	02555	02560	02565	1.16
W157-D1	1/4 x 1/16	01430	01435	01440	1.00	W189-D2	1/2 x 2	02000	02005	02010	2.42	W216-D1	1 x 1/4	02570	02575	02580	1.16
W158-D1	1/4 x 1/8	01445	01450	01455	1.00	W190-D1	5/8 x 1/16	02015	02020	02025	1.10	W216-D2	1 x 1/4	02585	02590	02595	1.16
W159-D1	1/4 x 3/16	01460	01465	01470	1.00	W191-D1	5/8 x 1/8	02030	02035	02040	1.10	W217-D2	1 x 3/8	02600	02605	02610	1.28
W160-D1	1/4 x 1/4	01475	01480	01485	1.00	W192-D1	5/8 x 1/4	02045	02050	02055	1.10	W218-D2	1 x 1/2	02615	02620	02625	1.28
W161-D1	1/4 x 5/16	01490	01495	01500	1.10	W192-D2	5/8 x 1/4	02060	02065	02070	1.10	W219-D2	1 x 3/4	02630	02635	02640	1.42
W162-D1	1/4 x 3/8	01505	01510	01515	1.10	W193-D1	5/8 x 3/8	02075	02080	02085	1.16	W220-D2	1 x 1	02645	02650	02655	1.52
W163-D1	1/4 x 1/2	01520	01525	01530	1.10	W193-D2	5/8 x 3/8	02090	02095	02100	1.16	W221-D2	1 x 1-1/2	02660	02665	02670	2.12
W164-D1	1/4 x 3/4	01535	01540	01545	1.16	W194-D1	5/8 x 1/2	02105	02110	02115	1.16	W222-D2	1 x 2	02675	02680	02685	2.62
W165-D1	5/16 x 1/16	01550	01555	01560	1.00	W194-D2	5/8 x 1/2	02120	02125	02130	1.16	W223-D2	1 x 2-1/2	02690	02695	02700	3.22
W166-D1	5/16 x 1/8	01565	01570	01575	1.00	W195-D1	5/8 x 3/4	02135	02140	02145	1.28	W225-D2	1-1/4 x 1/4	02705	02710	02715	1.42
W167-D1	5/16 x 1/4	01580	01585	01590	1.00	W195-D2	5/8 x 3/4	02150	02155	02160	1.28	W226-D2	1-1/4 x 3/8	02720	02725	02730	1.52
W168-D1	5/16 x 5/16	01595	01600	01605	1.10	W196-D2	5/8 x 1	02165	02170	02175	1.42	W227-D2	1-1/4 x 1/2	02735	02740	02745	1.52
W169-D1	5/16 x 3/8	01610	01615	01620	1.10	W197-D2	5/8 x 2	02180	02185	02190	2.52	W228-D2	1-1/4 x 3/4	02750	02755	02760	1.60
W170-D1	5/16 x 1/2	01625	01630	01635	1.10	W198-D2	5/8 x 2-1/2	02195	02200	02205	3.12	W229-D2	1-1/4 x 1	02765	02770	02775	1.81
W171-D1	5/16 x 3/4	01640	01645	01650	1.16	W199-D1	3/4 x 1/16	02210	02215	02220	1.10	W230-D2	1-1/4 x 1-1/4	02780	02785	02790	2.12
W172-D1	3/8 x 1/16	01655	01660	01665	1.00	W200-D1	3/4 x 1/8	02225	02230	02235	1.10	W231-D2	1-1/4 x 1-1/2	02795	02800	02805	2.52
W173-D1	3/8 x 1/8	01670	01675	01680	1.00	W201-D1	3/4 x 1/4	02240	02245	02250	1.10	W232-D2	1-1/4 x 2	02810	02815	02820	3.12
W174-D1	3/8 x 1/4	01685	01690	01695	1.00	W202-D1	3/4 x 3/8	02255	02260	02265	1.16	W235-D2	1-1/2 x 1/4	02825	02830	02835	1.52
W175-D1	3/8 x 3/8	01700	01705	01710	1.10	W202-D2	3/4 x 3/8	02270	02275	02280	1.16	W236-D2	1-1/2 x 1/2	02840	02845	02850	1.60
W176-D1	3/8 x 1/2	01715	01720	01725	1.10	W203-D1	3/4 x 1/2	02285	02290	02295	1.16	W237-D2	1-1/2 x 1	02855	02860	02865	1.92
W176-D2	3/8 x 1/2	01730	01735	01740	1.10	W203-D2	3/4 x 1/2	02300	02305	02310	1.16	W238-D2	1-1/2 x 1-1/2	02870	02875	02880	2.62
W177-D1	3/8 x 3/4	01745	01750	01755	1.16	W204-D1	3/4 x 3/4	02315	02320	02325	1.28	W239-D2	1-1/2 x 2	02885	02890	02895	3.22
W177-D2	3/8 x 3/4	01760	01765	01770	1.16	W204-D2	3/4 x 3/4	02330	02335	02340	1.28	W242-D2	2 x 1	02900	02905	02910	2.42
W178-D1	3/8 x 1	01775	01780	01785	1.28	W205-D2	3/4 x 1	02345	02350	02355	1.42	W243-D2	2 x 1-1/2	02915	02920	02925	3.22
W178-D2	3/8 x 1	01790	01795	01800	1.28	W206-D2	3/4 x 1-1/4	02360	02365	02370	1.66	W244-D2	2 x 2	02930	02935	02940	4.04
W179-D2	3/8 x 1-1/4	01805	01810	01815	1.60	W207-D2	3/4 x 1-1/2	02375	02380	02385	2.02						
W181-D1	1/2 x 1/16	01820	01825	01830	1.00	W208-D2	3/4 x 2	02390	02395	02400	2.52						

*These wheels are not intended to be grade specific (see pg. 9).
The end user may not always receive a wheel of the same grit size and hardness from one order to the next.

GENERAL PURPOSE MOUNTED POINTS (CONTINUED) MOUNTED POINT KITS



100 PIECE BLUE-GRAY 1/4" DIAMETER SHANKS



100 PIECE BURNT-ORANGE 1/4" DIAMETER SHANKS

THE 1/8" DIAMETER SHANK SET CONTAINS THE FOLLOWING SHAPES (5 OF EACH).

B42 B45 B52 B81 B91 B97 B102 B122 B136 W144 W146
W152 W160 W163 W167 W175 W176 W185 W200 W215

THE 1/4" DIAMETER SHANK SET CONTAINS THE FOLLOWING SHAPES.

A4 A12 A14 A21 A32 A37 A39 A40 W206 W218
5 OF EACH ARE IN THE 50 PIECE SET.
10 OF EACH ARE IN THE 100 PIECE SET.

EACH SET IS AVAILABLE IN THE FOLLOWING COLORS.

SET	COLOR	UPC # 691019-()	LIST PRICE
1/8" 100 PIECE	WHITE	02921	207.36
	BURNT-ORANGE	02922	
	BLUE-GRAY	02923	
1/4" 50 PIECE	WHITE	02931	150.72
	BURNT-ORANGE	02932	
	BLUE-GRAY	02933	
1/4" 100 PIECE	WHITE	02941	287.76
	BURNT-ORANGE	02942	
	BLUE-GRAY	02943	

WHITE:	SOFT TO MEDIUM HARDNESS WHEELS BEST SUITED FOR STOCK REMOVAL OF HARDER STEELS.
BURNT-ORANGE:	MEDIUM TO HARD WHEELS THAT OFFER A WIDE VARIETY OF USES, FROM STOCK REMOVAL TO LIGHT DEBURRING.
BLUE-GRAY:	HARD TO VERY HARD WHEELS THAT STAND UP WELL TO HEAVIER DUTY GRINDING APPLICATIONS.

NOTE: KIT SET-UP BOXES ARE AVAILABLE TO DISTRIBUTORS FOR DESIGN OF THEIR OWN DISPLAY SETS. CALL FOR PRICING (UPC#25000).



50 PIECE WHITE 1/4" DIAMETER SHANKS

GRADE SPECIFIC MOUNTED POINTS

The following pages depict groupings of wheels which are organized by bond type, grain type and color on charts that display the array of shapes, shanks, grit sizes and hardnesses that are usually on hand in either our finished or unfinished inventory. For each color grouping there is also shown both the range of hardnesses available and many competitive grade translations.

INITIAL CHOICE GRADE SELECTION GUIDE APPLICATION & RECOMMENDATION

ALUMINUM

- heavy deburring: coarse resin
- stock removal: fiber

BRASS: resin

CEMENTED CARBIDE: green s/c (best) or black s/c

CENTER HOLE GRINDING: See page 29

CENTER LAPPING (EX-CELL-O): See page 29

CERAMICS (hard and brittle): green s/c

CHAMFERING EDGES: very hard blue-gray

DEBURRING: very hard blue-gray or very hard grayish-white

FORGING DIE GRINDING: hard blue-gray

INTERNAL FIXED FEED:

- highest RC materials: very soft grayish-white
- general purpose tool room: soft white
- softer RC materials: medium burnt-orange

JIG GRINDING: See page 30

OFF HAND (PORTABLE) GRINDING (TOOLS AND DIES):

- general purpose stock removal: medium burnt-orange
- stock removal with light deburring: hard burnt-orange
- general deburring: hard to very hard blue-gray
- wear resistant steels: medium black s/c

POLISHING AND BLENDING: fiber

PROFILE GRINDING: See page 29

ROUGH GRINDING:

- castings with incorporated burnt sand: very hard, coarse black s/c
- castings with no burnt sand: hard, coarse blue-gray
- interrupted cut or severe dressing: very hard, coarse blue-gray

STAINLESS STEEL (400 SERIES): resin

TROUBLESHOOTING

PROBLEM	LIKELY CAUSE
Wheel loading/glazing	Wheel too hard or fine Not enough grinding pressure* RPM too fast
Chatter marks on workpiece	Wheel needs to be trued Wheel overhang is too great Wheel is too hard Grinder/collet is worn
Burning of workpiece	Wheel too hard or fine Not enough grinding pressure* Poor coolant flow (where used) Wrong bond type being used
Wheel life too short	Wrong grade Wheel, grinder or collet off balance

*never use excess grinding pressure!

GRADE SPECIFIC VITRIFIED MOUNTED POINTS

BLUE-GRAY ALUMINUM OXIDE

These vitrified bonded, aluminum oxide mounted points are available from Modern Abrasive in the following hardness range (popular hardnesses are highlighted).

I J **K** L M N O **P** Q R S T U V W X Y Z
 very soft soft medium hard very hard

They are typically used in hard (O thru R) wheels or very hard (T) wheels for deburring, chamfering and other heavy duty uses. They are also commonly used in very soft wheels for jig grinding and other precision applications.

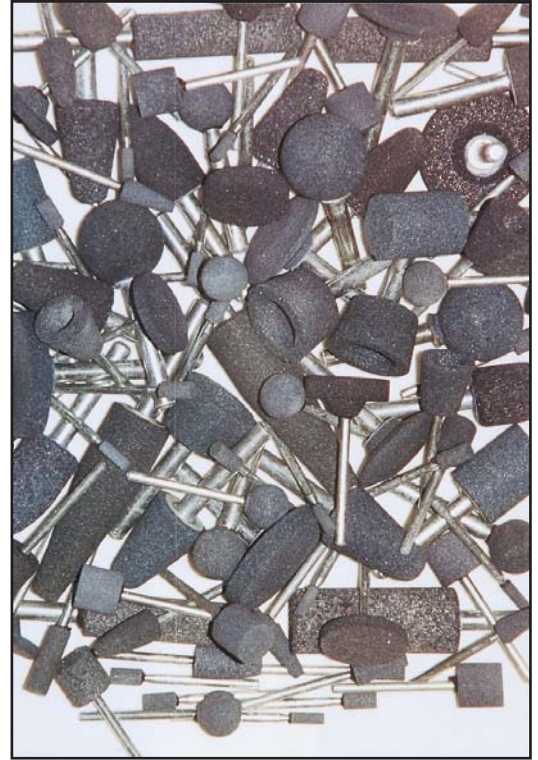
“A” shapes are mounted on 1/4" diameter by 1-1/2 long shanks

“B” shapes are mounted on 1/8" diameter by 1-1/2 long shanks

“W” shapes are mounted on the shanks specified:

D1 = 1/8" diameter by 1-1/2 long shank

D2 = 1/4" diameter by 1-1/2 long shank



Shape & \$ List	Grits & Hardnesses UPC # 691019-()			
A1	36-O	24-S	36-S	46-P
	02945	02949	02950	02955
	46-T	60-P	100-P	
15.20	02960	02965	02970	
A2	46-Q	60-P		
9.20	02980	02985		
A3	24-S	36-O	46-O	
	02990	02995	03005	
	46-T	60-O	120-P	
16.40	03010	03015	03016	
A4	36-P	60-P		
10.40	03020	03025		
A5	36-P	46-L	60-P	
8.80	03030	03035	03040	
A6	46-R	60-P		
8.80	03045	03050		
A11	24-R	24-T	30-R	36-P
	03055	03060	03065	03070
	36-T	46-O	46-T	60-P
	03075	03080	03085	03090
	80-N	80-P		
11.20	03095	03095		
A12	36-O	46-O	60-P	
8.80	03105	03115	03120	
A13	46-P	60-P		
10.40	03125	03130		
A14	46-P	60-P		
6.60	03140	03145		
A15	46-P	80-R		
8.40	03150	03155		
A21	36-P	60-P		
7.20	03160	03165		

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
A22	60-P		
6.40	03170		
A23	46-P	60-P	
6.60	03180	03185	
A24	46-P	80-R	80-S
6.00	03190	03205	03210
A25	36-P	60-P	
7.20	03215	03225	
A26	36-P	60-P	120-Q
6.40	03230	03235	03240
A31	36-P	60-P	
8.80	03250	03255	
A32	36-P	46-P	60-P
6.60	03260	03265	03270
A33	36-P	60-P	80-P
6.40	03275	03280	03285
A34	36-P	46-P	60-P
7.60	03295	03300	03305
A35	46-P	60-P	
6.40	03315	03320	
A36	46-P	60-R	
8.80	03325	03330	
A37	46-P	80-R	
6.60	03335	03340	
A38	36-P	46-P	60-Q
6.00	03355	03360	03365
A39	36-P	60-Q	
5.00	03370	03375	

Shape & \$ List	Grits & Hardnesses UPC # 691019-()			
A40	46-P	60-P	120-T	
6.40	03380	03385	03390	
B41	60-P			
6.40	03395			
B42	46-P	60-P	80-Q	
6.00	03400	03405	03410	
B43	80-R			
5.60	03415			
B44	46-P	80-R	90-T	120-T
5.60	03420	03435	03440	03445
B45	80-R			
5.60	03450			
B46	80-R	120-Q		
5.60	03455	03460		
B47	80-R			
5.00	03465			
B51	46-P	60-R	80-R	
6.00	03475	03480	03485	
B52	46-P	60-Q	80-R	
	03490	03500	03505	
	120-R	120-T		
6.00	03510	03515		
B53	46-Q	60-R	80-R	120-P
	03520	03525	03530	03535
	120-T			
6.00	03540			
B54	60-R	80-R		
5.60	03545	03550		
B55	80-R	80-T	120-R	120-T
5.00	03555	03560	03565	03570

GRADE SPECIFIC VITRIFIED MOUNTED POINTS (CONTINUED)

D1 = 1/8" X 1-1/2" SHANK

D2 = 1/4" X 1-1/2" SHANK

Shape & \$ List	Grits & Hardnesses UPC # 691019-()
B61 6.00	60-Q 03575
B62 5.60	60-P 03580
B63 5.00	80-R 03590
B64 5.00	80-R 03595
B65 5.00	80-R 120-R 03600 03605
B70 5.60	60-R 03610
B71 5.60	80-R 120-R 03620 03625
B72 5.00	80-R 120-R 03630 03635
B73 5.00	80-R 120-R 03640 03645
B74 5.00	120-R 03650
B81 5.60	80-R 90-T 120-R 03655 03660 03665
B82 5.00	80-R 03670
B83 5.00	80-R 03675
B84 5.00	80-R 03680
B90 5.60	60-P 03685
B91 6.00	46-P 60-P 90-T 03690 03695 03700
B92 5.00	80-R 03710
B93 5.00	80-R 03720
B94 5.00	120-R 03730
B95 5.00	80-R 03735
B96 5.00	60-X 80-T 80-R 120-R 03740 03745 03750 03755 120-T 03760
B97 5.60	80-R 90-T 120-R 120-T 03765 03770 03775 03780
B98 5.00	90-T 100-S 03790 03795
B101 6.40	60-Q 03800
B102 6.00	60-R 03805
B103 5.60	60-R 03810
B104 5.60	46-R 60-T 80-R 03815 03820 03825
B105 5.00	60-R 80-R 03830 03835
B106 5.00	80-R 03845
B111 6.00	60-P 03855
B112 5.60	60-P 80-R 03860 03700
B113 5.00	80-R 03870
B114 5.60	80-R 03875
B115 5.00	120-S 03880

Shape & \$ List	Grits & Hardnesses UPC # 691019-()
B121 5.60	60-P 80-R 120-R 03885 03890 03895
B122 5.60	46-P 60-P 80-R 120-S 03900 03905 03910 03915
B123 5.00	80-R 120-S 03920 03925
B124 5.00	80-R 120-R 03930 03940
B125 5.20	46-P 60-R 80-R 120-R 03945 03950 03955 03960
B131 4.40	46-P 60-Q 80-R 03965 03970 03975
B132 4.40	46-P 60-P 60-T 80-R 03980 03985 03990 03995 120-R 04000
B133 4.40	60-P 80-R 04005 04010
B134 4.40	60-P 80-P 04015 04020
B135 4.40	46-P 60-Q 80-Q 04025 04035 04040
B136 4.40	60-P 80-R 04050 04055
W141-D1 4.00	120-S 120-Y 04060 04065
W142-D1 4.00	90-T 100-S 04070 04075
W143-D1 4.00	80-R 120-R 120-Y 04080 04090 04095
W144-D1 4.00	60-M 80-R 80-T 120-R 04100 04105 04110 04115 120-T 120-Y 04120 04125
W145-D1 4.40	46-U 80-R 90-T 120-R 04130 04135 04140 04145
W146-D1 4.40	80-R 80-T 120-R 120-T 04160 04165 04170 04175 120-V 04180
W149-D1 4.00	80-R 04185
W151-D1 4.00	80-R 04190
W152-D1 4.00	80-R 80-T 120-R 120-T 04195 04200 04205 04210
W153-D1 4.40	60-T 80-R 90-T 100-V 04215 04220 04225 04230 120-R 120-Y 04235 04240
W154-D1 4.40	60-T 80-Q 90-T 04245 04250 04255
W157-D1 4.00	80-R 04260
W158-D1 4.00	80-R 04265
W159-D1 4.00	80-R 04270
W160-D1 4.00	46-P 60-J 60-R 60-T 04275 04280 04285 04290 80-R 90-T 120-R 120-V 04295 04300 04305 04310
W161-D1 4.40	80-R 04320
W162-D1 4.40	46-R 60-R 80-M 04325 04335 04340 80-R 90-T 120-R 150-T 04345 04350 04360 04365

Shape & \$ List	Grits & Hardnesses UPC # 691019-()
W163-D1 4.40	46-U 60-R 60-T 80-N 04370 04375 04380 04385 80-R 90-T 120-V 120-R 04390 04395 04396 04400
W164-D1 4.60	60-R 80-N 80-R 80-T 04405 04410 04415 04425
W165-D1 4.00	80-R 04435
W166-D1 4.00	60-R 04440
W167-D1 4.00	60-R 04450
W168-D1 4.40	60-R 04460
W169-D1 4.40	60-R 04470
W170-D1 4.40	46-U 60-R 120-R 120-T 04480 04485 04490 04495
W170-D2 4.40	46-U 60-R 120-R 120-T 04500 04505 04510 04515
W171-D1 4.60	60-R 60-T 120-R 04520 04525 04535
W171-D2 4.60	60-R 60-T 04540 04545
W172-D1 4.00	80-R 04560
W173-D1 4.00	80-R 04570
W174-D1 4.00	60-R 80-R 04575 04585
W175-D1 4.40	46-R 60-R 04595 04605 80-R 90-T 120-R 04615 04620 04630
W175-D2 4.40	46-R 60-L 60-R 04635 04640 04645 80-R 120-R 04655 04670
W176-D1 4.40	46-P 46-U 60-M 60-Q 04675 04680 04685 04690 60-T 80-R 90-T 04695 04710 04715
W176-D2 4.40	60-M 60-Q 60-T 80-R 04735 04740 04745 04760 90-T 120-T 04765 04770
W177-D1 4.60	46-P 60-Q 60-T 80-R 04775 04780 04785 04790 120-P 04795
W177-D2 4.60	46-P 60-Q 60-T 80-R 04800 04805 04810 04815 120-P 04820
W178-D1 5.00	60-Q 80-R 04830 04835
W178-D2 5.00	60-Q 80-R 04845 04850
W179-D2 6.40	46-P 60-P 60-S 80-R 04860 04865 04870 04875
W181-D1 4.00	80-R 120-R 04880 04885
W182-D1 4.00	46-T 80-R 120-R 120-T 04890 04900 04905 04910
W183-D1 4.00	60-R 60-T 80-P 04920 04925 04930

GRADE SPECIFIC VITRIFIED MOUNTED POINTS (CONTINUED)
D1 = 1/8" X 1-1/2" SHANK **D2 = 1/4" X 1-1/2" SHANK**

Shape & \$ List	Grits & Hardnesses UPC # 691019-()
W184-D1 4.40	60-R 80-P 04935 04940
W184-D2 4.40	60-R 80-P 04945 04950
W185-D1 4.40	46-L 46-P 46-T 60-K 04955 04960 04965 04970 60-M 60-Q 60-T 80-N 04975 04980 04985 04995 80-R 90-T 100-N 120-R 05000 05010 05015 05020
W185-D2 4.40	46-P 46-T 60-K 60-M 05035 05040 05045 05050 60-Q 60-T 80-L 80-N 05055 05060 05065 05070 80-R 100-N 120-R 05075 05090 05095
W186-D1 4.60	36-P 60-Q 60-T 05105 05115 05120
W186-D2 4.60	36-P 60-N 60-Q 05125 05135 05140 60-T 80-M 80-R 05145 05150 05155
W187-D1 5.00	36-R 60-R 60-T 05065 05165 05170
W187-D2 5.00	36-R 36-T 05185 05190 60-R 60-T 80-P 05205 05210 05220
W188-D2 7.60	36-T 46-P 05235 05240 60-P 60-T 80-P 05250 05255 05260
W189-D2 9.60	46-P 60-Q 05265 05270
W190-D1 4.40	80-R 05280
W191-D1 4.40	80-R 120-T 05290 05295
W192-D1 4.40	60-P 05300
W193-D1 4.60	60-P 05320
W193-D2 4.60	60-P 05335
W194-D1 4.60	60-P 05345
W194-D2 4.60	60-P 05360
W195-D1 5.00	60-Q 60-T 80-R 05380 05385 05390
W195-D2 5.00	46-P 60-Q 60-T 80-R 05395 05405 05410 05415
W196-D2 5.60	36-Q 60-P 80-L 05420 05425 05430
W197-D2 10.00	24-T 36-P 60-P 05435 05440 05450
W198-D2 12.40	80-L 05460
W199-D1 4.40	60-Q 80-R 05475 05480

Shape & \$ List	Grits & Hardnesses UPC # 691019-()
W200-D1 4.40	60-Q 80-L 80-R 120-T 05495 05430 05510 05520
W201-D1 4.40	60-P 80-R 05530 05540
W201-D2 4.40	60-P 80-R 05550 05560
W202-D1 4.60	60-P 80-R 05565 05570
W202-D2 4.60	60-P 80-R 05580 05585
W203-D1 4.60	60-Q 80-R 05595 05600
W203-D2 4.60	60-Q 80-R 05610 05615
W204-D1 5.00	60-P 120-T 05630 05645
W204-D2 5.00	60-L 60-P 60-T 05650 05655 05660 80-R 90-V 05670 05675
W205-D2 5.60	60-P 60-T 80-L 05705 05710 05720
W206-D2 6.60	60-P 05730
W207-D2 8.00	36-Q 60-P 05740 05745
W208-D2 10.00	24-T 36-P 60-P 05750 05760 05770
W209-D2 12.40	36-O 46-O 60-P 05780 05785 05790
W210-D1 4.60	60-P 80-R 05800 05805
W211-D1 4.60	60-P 80-R 05810 05815
W211-D2 4.60	60-P 80-R 05820 05825
W212-D1 4.60	60-P 05830
W212-D2 4.60	60-P 05840
W213-D1 5.00	60-P 05850
W213-D2 5.00	60-P 05855
W214-D1 4.60	60-Q 05860
W215-D1 4.60	46-P 60-Q 60-T 80-N 05865 05870 05875 05880 80-Q 120-T 05885 05890
W215-D2 4.60	60-Q 60-T 80-N 80-Q 05895 05900 05905 05910
W216-D1 4.60	46-P 60-Q 60-T 80-N 05915 05920 05925 05930 120-P 05935
W216-D2 4.60	46-P 60-Q 60-T 05940 05945 05950
W217-D2 5.00	46-P 60-P 05965 05970

Shape & \$ List	Grits & Hardnesses UPC # 691019-()
W218-D2 5.00	36-P 46-P 54-J 60-K 05980 05985 05990 05995 60-P 80-P 120-P 06000 06015 06020
W219-D2 5.60	36-P 60-P 06025 06040
W220-D2 6.00	24-T 36-P 46-P 06045 06050 06060 60-Q 60-T 80-K 120-R 06070 06075 06080 06090
W221-D2 8.40	24-S 30-T 36-P 60-P 06095 06100 06105 06110
W222-D2 10.40	24-T 36-M 36-P 46-P 06120 06125 06130 06135 60-P 06145
W223-D2 12.80	36-P 60-P 06155 06165
W224-D2 14.80	60-P 06180
W225-D2 5.60	46-P 60-P 06185 06190
W226-D2 6.00	36-R 60-P 06195 06205
W227-D2 6.00	36-P 60-P 06210 06225
W228-D2 6.40	36-P 60-P 06230 06240
W229-D2 7.20	36-P 60-P 06245 06250
W230-D2 8.40	30-Q 36-O 60-P 06265 06270 06280
W231-D2 10.00	36-P 60-P 06290 06295
W232-D2 12.80	36-O 60-P 06300 06305
W235-D2 6.00	46-P 60-K 60-P 80-R 06330 06335 06345 06350
W236-D2 6.40	30-R 36-P 46-P 54-J 06355 06360 06365 06370 60-K 60-P 06375 06380
W237-D2 7.60	36-P 60-P 06395 06410
W238-D2 10.40	24-T 36-P 60-P 06420 06425 06430
W239-D2 12.80	60-P 06435
W241-D2 18.00	60-P 06450
W242-D2 9.60	36-P 46-P 46-T 60-P 06465 06470 06475 06480
W243-D2 12.80	46-P 06485
W244-D2 16.00	60-O 06500

GRADE SPECIFIC VITRIFIED MOUNTED POINTS (CONTINUED)

BURNT ORANGE ALUMINUM OXIDE

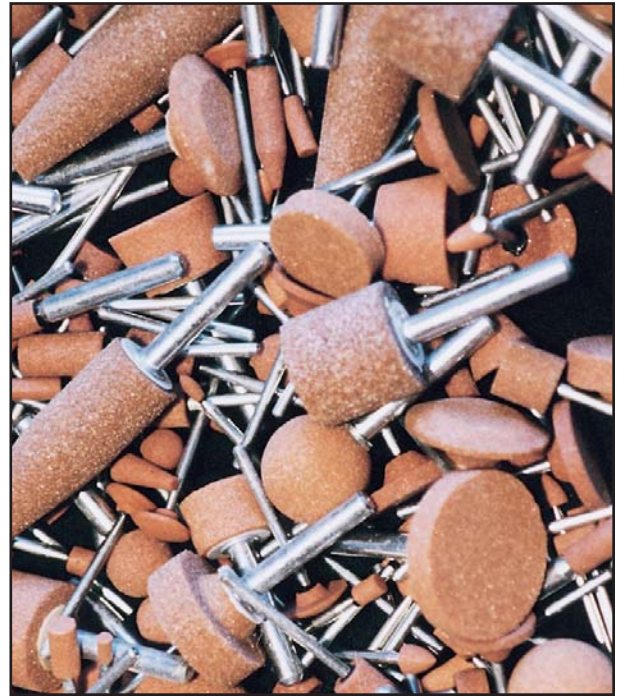
These vitrified bonded, aluminum oxide mounted points are available from Modern Abrasive in the following hardness range (popular hardnesses are highlighted).

J
K
L
M
N
O
P
Q
R
S
T
U
V
W
X
Y
Z

very soft
soft
medium
hard
very hard

They are typically used in medium (R) hardness for stock removal of steel and are also occasionally used in a harder (U) wheel for deburring.

- “A” shapes are mounted on 1/4" diameter by 1-1/2 long shanks
- “B” shapes are mounted on 1/8" diameter by 1-1/2 long shanks
- “W” shapes are mounted on the shanks specified:
 - D1 = 1/8" diameter by 1-1/2 long shank
 - D2 = 1/4" diameter by 1-1/2 long shank



Shape & \$ List	Grits & Hardnesses UPC # 691019-()
A1 15.20	36-R 36-U 46-R 60-M 06505 06510 06515 06520
	60-R 60-U 90-R 06525 06530 06535
	46-R 46-U 60-R 06545 06550 06555
	60-U 90-R 06560 06565
A2 9.20	36-R 36-U 46-R 60-N 06570 06575 06580 06585
	60-R 60-U 90-R 06590 06595 06600
	36-S 46-R 60-R 60-U 06605 06610 06615 06620
	90-R 06625
A4 10.40	24-U 36-R 46-R 60-R 06630 06635 06640 06645
	60-U 90-R 06650 06655
	46-R 60-R 60-U 90-R 06665 06670 06675 06680
	30-U 36-R 46-R 60-J 06685 06690 06695 06700
A11 11.20	60-R 60-U 90-R 06705 06710 06715
	24-U 36-R 36-U 60-R 06720 06725 06730 06735
	60-U 90-R 90-U 06740 06745 06750
	24-R 36-R 60-R 60-U 06755 06760 06765 06770
A13 10.40	90-R 06775

Shape & \$ List	Grits & Hardnesses UPC # 691019-()
A14 6.60	60-R 60-U 90-R 06790 06795 06805
	46-S 60-M 60-R 60-U 06810 06815 06820 06825
	90-R 90-U 120-R 06830 06835 06840
A15 8.40	36-R 46-R 60-R 60-U 06845 06850 06855 06860
	60-R 60-U 06865 06870
A21 7.20	46-R 60-R 60-U 90-R 06880 06890 06895 06900
	60-R 60-U 90-R 06915 06920 06930
A22 6.40	90-U 120-R 06935 06940
	24-U 36-R 46-U 60-R 06945 06950 06955 06960
A23 6.60	60-U 90-R 06965 06970
	60-R 60-U 90-R 120-R 06980 06985 06990 06995
A24 6.00	36-R 36-U 46-R 60-R 07000 07005 07015 07020
	60-U 90-R 07025 07030
A25 7.20	24-U 36-R 60-R 60-U 07040 07045 07050 07055
	90-R 07060
A26 6.40	
A31 8.80	
A32 6.60	

Shape & \$ List	Grits & Hardnesses UPC # 691019-()
A33 6.40	46-R 60-R 60-U 90-R 07075 07080 07085 07090
	90-U 120-R 07095 07100
A34 7.60	36-R 60-R 60-U 90-R 07105 07115 07120 07125
	60-R 60-U 07135 07140
A35 6.40	46-R 60-M 60-R 60-U 07145 07150 07155 07160
	90-R 07165
A36 8.80	46-R 60-R 60-U 90-R 07175 07185 07190 07195
	24-U 36-R 46-R 46-U 07200 07205 07210 07215
A37 6.60	60-R 60-U 90-R 120-R 07225 07230 07235 07240
	36-R 46-R 60-R 60-U 07245 07250 07260 07265
A38 6.00	90-R 07270
	36-R 60-R 60-U 07275 07285 07290
A39 5.00	36-R 60-R 60-U 90-U 07295 07300 07305 07315
	46-R 60-R 60-U 90-U 07320 07325 07330 07340
A40 6.40	60-R 60-U 90-R 90-U 07345 07350 07355 07360
	54-R 60-R 60-U 90-R 07365 07370 07375 07380
A41 6.40	90-U 120-R 07385 07390
A42 6.00	
A43 5.60	
A44 5.60	

GRADE SPECIFIC VITRIFIED MOUNTED POINTS (CONTINUED)
D1 = 1/8" X 1-1/2" SHANK **D2 = 1/4" X 1-1/2" SHANK**

Shape & \$ List	Grits & Hardnesses UPC # 691019-()				
B45	5.60	60-R 07395	60-U 07400	90-R 07405	90-U 07410
B46	5.60	60-R 07415	60-U 07420	90-R 07425	90-U 07430
B47	5.00	60-R 07440	90-R 07445	90-U 07450	120-R 07455
B51	6.00	46-R 07460	60-R 07465	60-U 07470	90-R 07475
B52	6.00	46-R 07485	46-U 07490	60-R 07495	60-U 07500
B53	6.00	60-R 07525	60-U 07530	90-R 07535	90-U 07540
B54	5.60	60-R 07550	60-U 07555	90-R 07560	90-U 07565
B55	5.00	60-R 07570	60-U 07575	90-R 07580	90-U 07585
B61	6.00	60-R 07600	60-U 07605	90-R 07610	
B62	5.60	46-R 07615	60-R 07620	60-U 07625	90-R 07630
B63	5.00	60-R 07640	90-R 07645	90-U 07650	
B64	5.00	90-R 07655	90-U 07660		
B65	5.00	60-R 07665	60-U 07670	90-R 07675	90-U 07680
B70	5.60	60-R 07685	60-U 07690	90-R 07695	120-R 07700
B71	5.60	60-R 07710	90-R 07715	90-U 07720	120-R 07725
B72	5.00	60-R 07730	90-R 07735	90-U 07740	120-R 07745
B73	5.00	60-R 07750	90-R 07755	90-U 07760	120-R 07765
B74	5.00	100-W 07775			
B81	5.60	60-R 07780	60-U 07785	90-R 07790	120-R 07800
B82	5.00	60-R 07805	90-R 07810	90-U 07815	
B83	5.00	60-R 07820	90-R 07825	90-U 07830	
B84	5.00	60-R 07835	90-U 07840	120-R 07845	
B90	5.60	60-R 07850	60-U 07855	90-R 07860	
B91	6.00	60-R 07865	60-U 07870	90-R 07875	
B92	5.00	60-R 07885	60-U 07890	90-R 07895	90-U 07900
B93	5.00	60-R 07905	60-U 07910	90-R 07915	90-U 07920
B94	5.00	90-U 07925			
B95	5.00	60-R 07930	90-R 07935		

Shape & \$ List	Grits & Hardnesses UPC # 691019-()				
B96	5.00	60-R 07945	60-U 07950	90-R 07955	90-U 07960
B97	5.60	60-R 07975	60-U 07980	90-R 07985	90-U 07990
B98	5.00	60-R 08015	90-R 08020	90-U 08025	120-R 08030
B101	6.40	46-R 08040	60-R 08045	90-R 08050	90-U 08055
B102	6.00	60-R 08065	90-U 08075		
B103	5.60	60-R 08080	60-U 08085	90-R 08090	90-U 08095
B104	5.60	60-R 08100	90-R 08105	90-U 08110	
B105	5.00	60-R 08120	60-U 08125	90-R 08130	120-R 08140
B106	5.00	60-R 08145	60-U 08150	90-R 08155	
B111	6.00	60-R 08170	60-U 08175	90-R 08180	90-U 08185
B112	5.60	60-R 08195	60-U 08200	90-R 08205	90-U 08210
B113	5.00	60-R 08215	60-U 08220	90-R 08225	
B114	5.60	60-R 08230	60-U 08235	90-R 08240	
B115	5.00	90-R 08245			
B121	5.60	46-R 08255	60-R 08260	60-U 08265	90-R 08270
B122	5.60	60-R 08280	60-U 08285	90-R 08300	90-U 08305
B123	5.00	60-R 08315	60-U 08320	60-W 08325	90-O 08330
B124	5.00	60-R 08335	60-U 08340	90-R 08345	90-U 08355
B125	5.20	60-R 08365	60-U 08370	90-R 08375	90-U 08380
B131	4.40	46-R 08415	60-N 08420	60-R 08425	60-U 08430
B132	4.40	90-R 08435	90-U 08440	120-R 08445	
B133	4.40	46-R 08450	60-N 08455	60-R 08460	60-U 08465
B134	4.40	90-R 08470	90-U 08475	120-R 08480	
B135	4.40	60-R 08485	60-U 08490	90-R 08495	90-U 08500
B136	4.40	60-R 08510	60-U 08515	90-R 08520	90-U 08525
B137	4.40	54-R 08530	60-R 08535	60-U 08540	90-R 08545
B138	4.40	90-U 08550	120-R 08555		

Shape & \$ List	Grits & Hardnesses UPC # 691019-()				
B136	4.40	60-R 08560	60-U 08565	90-R 08570	90-U 08575
W141-D1	4.00	60-U 08580	90-R 08585	90-U 08590	
W142-D1	4.00	60-R 08595	90-R 08600	90-U 08605	120-R 08610
W143-D1	4.00	60-R 08620	60-U 08625	90-R 08630	90-U 08635
W144-D1	4.00	46-R 08650	60-N 08655	60-R 08660	60-U 08665
W145-D1	4.40	90-R 08670	90-U 08675	120-R 08680	120-U 08685
W146-D1	4.40	46-R 08710	60-R 08715	60-U 08720	90-R 08725
W149-D1	4.00	46-R 08755	60-R 08760	60-U 08765	90-R 08770
W151-D1	4.00	60-R 08775	90-R 08780	120-R 08785	90-U 08790
W152-D1	4.00	46-R 08805	60-R 08810	60-U 08815	90-N 08820
W153-D1	4.40	90-R 08825	90-U 08830	120-R 08835	120-U 08840
W154-D1	4.40	46-R 08845	60-R 08850	60-U 08855	90-R 08860
W155-D1	4.00	60-R 08875	60-U 08880	90-N 08885	90-R 08890
W156-D1	4.00	60-R 08895	60-U 08900	90-N 08905	90-R 08910
W157-D1	4.00	90-R 08915	90-U 08920	120-R 08925	
W158-D1	4.00	60-R 08935	60-U 08940	90-R 08945	90-U 08950
W159-D1	4.00	60-R 08955	90-R 08960	90-U 08965	120-R 08970
W160-D1	4.00	60-R 08970	60-U 08975	90-N 08980	90-R 08985
W161-D1	4.40	60-R 08990	60-U 08995	80-N 09000	
W162-D1	4.40	46-R 09015	60-R 09020	60-U 09025	90-R 09030
W163-D1	4.40	90-U 09035	120-R 09040		
W163-D2	4.40	46-R 09045	60-M 09050	60-R 09060	60-U 09065
W164-D1	4.60	80-N 09070	90-R 09080	90-U 09085	120-R 09090
W165-D1	4.60	60-M 09105	60-R 09110	60-U 09115	80-N 09120
W166-D1	4.60	80-O 09130	90-R 09135	120-R 09140	120-U 09145
W167-D1	4.60	54-R 09150	60-N 09155	60-R 09160	60-U 09165
W168-D1	4.60	90-R 09170	90-U 09175	120-R 09180	120-U 09185

GRADE SPECIFIC VITRIFIED MOUNTED POINTS (CONTINUED)

D1 = 1/8" X 1-1/2" SHANK

D2 = 1/4" X 1-1/2" SHANK

Shape & \$ List	Grits & Hardnesses UPC # 691019-()
W164-D2 4.60	54-R 60-U 60-R 60-U 09195 09200 09210 09215 60-W 90-R 90-U 09220 09225 09230
W165-D1 4.00	90-R 90-U 09235 09240
W166-D1 4.00	90-R 09245
W167-D1 4.00	60-R 90-R 09250 09260
W168-D1 4.40	60-R 60-U 09275 09280
W169-D1 4.40	60-R 60-U 90-U 09290 09295 09305
W170-D1 4.40	60-N 60-R 60-S 60-U 09310 09315 09320 09325 90-R 90-U 09335 09340
W170-D2 4.40	60-R 60-S 60-U 90-U 09350 09355 09360 09375
W171-D1 4.60	60-R 60-U 90-R 90-U 09380 09385 09390 09395 120-R 09400
W171-D2 4.60	60-R 90-R 90-U 120-R 09405 09415 09420 09425
W172-D1 4.00	90-R 09435
W173-D1 4.00	90-R 90-U 09455 09460
W174-D1 4.00	60-R 60-U 90-R 90-U 09475 09480 09485 09490
W174-D2 4.00	60-R 90-U 09500 09515
W175-D1 4.40	46-R 60-N 60-R 60-U 09520 09525 09530 09535 90-R 90-U 120-R 09540 09545 09550
W175-D2 4.40	46-R 60-R 90-R 90-U 09555 09565 09575 09580 120-R 09585
W176-D1 4.40	60-N 60-R 60-S 60-U 09600 09605 09610 09615 90-R 90-U 120-R 09625 09630 09640
W176-D2 4.40	30-R 46-R 60-N 60-R 09645 09650 09655 09660 60-U 90-R 90-U 120-R 09670 09680 09685 09695
W177-D1 4.60	36-R 46-R 60-R 60-U 09700 09705 09715 09720 90-R 90-U 09730 09735
W177-D2 4.60	36-R 46-R 60-M 60-R 09740 09745 09750 09755 60-U 90-R 90-U 09760 09770 09775
W178-D1 5.00	36-R 60-R 60-U 90-R 09780 09785 09790 09795 120-R 09800
W178-D2 5.00	46-R 46-U 60-R 60-U 09805 09810 09815 09820 90-R 09825
W179-D2 6.40	36-R 46-R 46-U 60-N 09830 09835 09840 09845 60-R 60-U 90-R 90-U 09850 09855 09860 09865
W181-D1 4.00	60-R 60-U 90-R 90-U 09875 09880 09885 09890 120-R 09895

Shape & \$ List	Grits & Hardnesses UPC # 691019-()
W182-D1 4.00	60-R 60-U 90-R 90-U 09905 09910 09915 09920 120-R 09925
W183-D1 4.00	46-R 60-R 60-U 90-R 09935 09940 09945 09950
W184-D1 4.40	60-N 60-R 60-U 90-R 09955 09960 09965 09970 90-U 09975
W184-D2 4.40	60-N 60-R 60-U 09980 09985 09990
W185-D1 4.40	36-R 46-R 60-N 60-R 10005 10010 10015 10020 60-U 80-J 80-K 90-R 10025 10030 10035 10040 90-U 120-N 120-R 10045 10050 10055
W185-D2 4.40	36-R 46-R 60-N 60-R 10065 10070 10075 10080 60-U 80-J 80-K 90-R 10085 10090 10095 10100 90-U 120-N 120-R 120-U 10105 10110 10115 10120
W186-D1 4.60	60-R 60-U 90-R 90-U 10125 10130 10135 10140 120-R 10145
W186-D2 4.60	60-R 60-U 90-R 90-U 10160 10165 10170 10175
W187-D1 5.00	46-R 60-R 60-U 90-R 10180 10195 10200 10205
W187-D2 5.00	36-R 46-R 46-U 60-R 10210 10215 10220 10230 60-U 90-R 90-U 10235 10240 10245
W188-D2 7.60	46-R 46-U 60-R 60-U 10255 10260 10270 10275 90-R 120-R 10280 10285
W189-D2 9.60	46-R 46-U 60-R 60-U 10290 10295 10300 10305 90-R 90-U 120-R 10310 10315 10320
W190-D1 4.40	60-R 90-R 90-U 10325 10335 10340
W191-D1 4.40	46-R 60-R 60-U 90-R 10345 10350 10355 10360 90-U 120-R 10365 10370
W192-D1 4.40	60-R 60-U 90-R 120-R 10380 10385 10390 10395
W193-D1 4.60	60-R 60-U 90-R 90-U 10400 10405 10410 10415 120-R 10420
W193-D2 4.60	60-R 60-U 90-R 90-U 10425 10430 10435 10440 120-R 10445
W194-D1 4.60	60-R 60-U 90-R 10450 10455 10465
W194-D2 4.60	60-R 60-U 90-R 120-R 10475 10480 10485 10495
W195-D1 5.00	60-R 60-U 90-R 10500 10505 10510
W195-D2 5.00	60-R 60-U 90-R 90-U 10520 10525 10530 10535
W196-D2 5.60	36-R 46-U 60-R 60-U 10540 10545 10550 10555 90-R 10565
W197-D2 10.00	36-U 46-R 60-R 60-U 10570 10575 10580 10585 90-R 120-U 10590 10595

Shape & \$ List	Grits & Hardnesses UPC # 691019-()
W198-D2 12.40	36-R 60-R 10600 10605
W199-D1 4.40	60-R 90-R 90-U 10615 10620 10625
W200-D1 4.40	46-U 60-N 60-R 60-U 10630 10635 10640 10645 90-R 90-U 120-N 120-R 10650 10655 10660 10665
W201-D1 4.40	60-N 60-R 60-U 90-R 10670 10675 10680 10685 90-U 120-R 10690 10695
W201-D2 4.40	60-N 60-R 60-U 90-R 10700 10705 10710 10715 90-U 120-R 10720 10725
W202-D1 4.60	60-N 60-R 60-U 90-R 10730 10735 10740 10745 120-R 10750
W202-D2 4.60	60-N 60-R 60-U 90-R 10755 10760 10765 10770 120-R 10775
W203-D1 4.60	46-R 60-R 60-U 10785 10790 10795 90-R 90-U 120-R 10800 10805 10810
W203-D2 4.60	46-R 60-R 90-R 90-U 10820 10830 10840 10845
W204-D1 5.00	60-R 60-U 10860 10865
W204-D2 5.00	46-R 60-N 60-R 60-U 10880 10890 10895 10900 90-R 90-U 10905 10910
W205-D2 5.60	24-U 36-R 36-U 46-N 10920 10925 10930 10935 46-R 60-N 60-R 60-U 10940 10945 10950 10955 90-R 90-U 10960 10965
W206-D2 6.60	36-R 60-R 60-U 120-R 10975 10980 10985 10990
W207-D2 8.00	46-R 60-R 60-U 90-R 11000 11005 11010 11015
W208-D2 10.00	36-R 60-R 60-U 11020 11030 11035
W209-D2 12.40	60-K 60-R 120-R 11055 11060 11070
W210-D2 4.60	60-R 90-R 120-U 11075 11080 11085
W211-D1 4.60	60-R 60-U 90-R 120-U 11090 11095 11100 11105
W211-D2 4.60	60-R 60-U 90-R 120-U 11110 11115 11120 11125
W212-D1 4.60	60-R 11130
W212-D2 4.60	60-R 11135
W213-D1 5.00	60-R 11145
W213-D2 5.00	60-R 90-R 11150 11155
W214-D1 4.60	60-R 11160
W215-D1 4.60	60-R 60-U 90-O 90-R 11170 11175 11180 11185 90-U 11190
W215-D2 4.60	46-R 60-R 60-U 90-R 11200 11205 11210 11215
W216-D1 4.60	46-R 60-R 60-U 90-R 11230 11245 11250 11255

GRADE SPECIFIC VITRIFIED MOUNTED POINTS (CONTINUED)
D1 = 1/8" X 1-1/2" SHANK **D2 = 1/4" X 1-1/2" SHANK**

Shape & \$ List	Grits & Hardnesses UPC # 691019-()
W216-D2 4.60	46-R 46-J 60-R 90-R 11260 11265 11275 11285
W217-D2 5.00	24-U 46-R 60-R 60-J 11290 11295 11300 11305 90-R 90-J 11310 11315
W218-D2 5.00	46-N 46-R 60-K 60-N 11320 11325 11330 11335 60-R 60-J 80-L 90-R 11340 11345 11350 11355
W219-D2 5.60	36-R 36-J 60-R 60-J 11365 11370 11375 11380 36-R 36-J 46-R 46-J 11390 11395 11405 11410
W220-D2 6.00	60-N 60-R 60-J 90-R 11415 11420 11425 11435 90-J 11440
W221-D2 8.40	24-O 24-T 36-R 46-R 11450 11455 11460 11465 60-R 60-J 90-R 11470 11475 11480
W222-D2 10.40	36-R 46-R 60-R 60-J 11490 11495 11500 11505 90-R 11510
W223-D2 12.80	36-R 60-R 11515 11520
W225-D2 5.60	46-R 60-R 60-J 90-R 11545 11555 11560 11565 36-R 46-R 60-L 60-R
W226-D2 6.00	11570 11575 11580 11585 60-U 90-R 11590 11595
W227-D2 6.00	36-R 60-R 60-J 90-R 11600 11605 11610 11615 90-U 11620
W228-D2 6.40	46-R 60-R 11625 11630
W229-D2 7.20	36-R 36-J 60-R 60-J 11635 11640 11645 11650
W230-D2 8.40	36-R 60-N 60-R 60-J 11665 11670 11675 11680
W231-D2 10.00	60-R 11685
W232-D2 12.40	60-N 60-R 60-J 11690 11695 11700

Shape & \$ List	Grits & Hardnesses UPC # 691019-()
W235-D2 6.00	36-R 46-R 60-R 60-J 11710 11715 11720 11725 80-K 90-R 90-J 120-R 11730 11735 11740 11745
W236-D2 6.40	24-R 36-R 36-J 46-R 11750 11755 11760 11765 60-N 60-R 60-J 80-K 11770 11775 11780 11785 120-R 11795
W237-D2 7.60	36-R 36-J 60-R 60-J 11800 11805 11820 11825 80-K 90-R 11830 11835
W238-D2 10.40	24-T 36-J 46-R 60-N 11845 11850 11855 11860 60-R 60-J 11865 11870
W239-D2 12.80	36-R 60-R 11875 11885
W242-D2 9.60	24-R 36-R 36-J 46-R 11890 11895 11900 11905 60-K 60-R 60-J 90-R 11910 11915 11920 11925
W243-D2 12.80	36-R 60-N 60-R 11930 11940 11945
W244-D2 16.00	60-R 11950

GRADE SPECIFIC VITRIFIED MOUNTED POINTS (CONTINUED)

D1 = 1/8" X 1-1/2" SHANK

D2 = 1/4" X 1-1/2" SHANK

Shape & \$ List	Grits & Hardnesses UPC # 691019-()			
B97 5.60	46-T 12605	80-R 12610	120-R 12620	
B98 5.00	60-T 12635 120-R 12650	80-R 12640	100-N 12645	
B101 6.40	46-T 12655	60-Q 12660		
B102 6.00	80-Q 12665			
B103 5.60	60-Q 12670	100-T 12675		
B104 5.60	90-Q 12685			
B105 5.00	90-R 12695			
B106 5.00	60-K 12700	90-R 12705		
B111 6.00	60-Q 12710			
B112 5.60	60-Q 12715			
B113 5.00	90-R 12725			
B114 5.60	90-Q 12730			
B115 5.00	120-R 12735			
B121 5.60	46-T 12740 60-W 12755	60-M 12745 120-Q 12765	60-Q 12750	
B122 5.60	60-Q 12775 100-S 12790	60-V 12780	100-N 12785	
B123 5.00	60-R 12795	120-R 12800		
B124 5.00	60-K 12805	90-R 12810		
B125 5.20	60-N 12815	60-Q 12820		
B131 4.40	46-T 12830	60-Q 12840	120-Q 12845	
B132 4.40	46-T 12855 120-Q 12870	60-N 12860	80-Q 12865	
B133 4.40	46-T 12875	60-Q 12885	90-Q 12890	
B134 4.40	60-N 12895	60-Q 12900	60-T 12905	
B135 4.40	80-N 12915 120-R 12930	80-Q 12920	90-T 12925	
B136 4.40	60-Q 12935	60-T 12940	120-Q 12945	
W141-D1 4.00	120-R 12950			
W142-D1 4.00	60-T 12955 120-T 12970	80-R 12960	100-N 12965	

Shape & \$ List	Grits & Hardnesses UPC # 691019-()			
W143-D1 4.00	60-K 12975	90-R 12980		
W144-D1 4.00	90-R 12990	100-N 12995	120-R 13000	
W145-D1 4.40	80-R 13005	120-R 13015		
W146-D1 4.40	80-R 13025	120-R 13030	120-T 13035	
W149-D1 4.00	120-Q 13040			
W151-D1 4.00	90-Q 13045			
W152-D1 4.00	80-R 13050			
W153-D1 4.40	80-Q 13070	120-T 13075		
W154-D1 4.40	80-N 13090	80-R 13095	120-T 13100	
W157-D1 4.00	80-Q 13105	120-T 13110		
W158-D1 4.00	80-Q 13115	120-T 13120		
W159-D1 4.00	120-T 13125			
W160-D1 4.00	46-T 13130 60-Q 13145	60-K 13135 80-K 13155	60-N 13140 90-R 13160	
W161-D1 4.40	60-Q 13175	90-T 13180	120-R 13185	
W162-D1 4.40	80-N 13190 60-K 13210	120-Q 13205	80-K 13187 60-N 13215 13220	
W163-D1 4.40	90-T 13225 120-W 13240	100-N 13230	120-Q 13235	
W163-D2 4.40	60-Q 13255	90-T 13260	120-W 13275	
W164-D1 4.60	60-P 13280 120-Q 13295	80-Q 13285	80-T 13290	
W164-D2 4.60	60-P 13300	80-Q 13305	120-Q 13315	
W165-D1 4.00	90-Q 13320			
W166-D1 4.00	120-T 13330			
W167-D1 4.00	90-Q 13335	120-T 13340		
W168-D1 4.40	80-L 13345	90-Q 13350		
W169-D1 4.40	80-Q 13355			
W170-D1 4.40	60-Q 13365	100-Q 13375		
W170-D2 4.40	60-N 13380	100-Q 13395		
W171-D1 4.60	60-Q 13400			
W171-D2 4.60	60-Q 13405			

Shape & \$ List	Grits & Hardnesses UPC # 691019-()			
W172-D1 4.00	90-R 13410			
W173-D1 4.00	90-R 13425	100-R 13430		
W174-D1 4.00	60-Q 13450	80-Q 13455		
W175-D1 4.40	60-N 13465	60-Q 13470	80-H 13475	
W175-D2 4.40	60-N 13480	60-Q 13485	80-H 13490	
W176-D1 4.40	60-N 13500 100-N 13515	80-Q 13505	90-T 13510	
W176-D2 4.40	60-N 13525	80-Q 13530	90-T 13535	
W177-D1 4.60	46-P 13545	60-Q 13550		
W177-D2 4.60	46-P 13555	60-Q 13560		
W178-D1 5.00	60-Q 13565			
W178-D2 5.00	46-P 13570	60-Q 13575		
W179-D2 6.40	46-Q 13590	60-Q 13595	80-Q 13600	
W181-D1 4.00	80-Q 13610	100-T 13620		
W182-D1 4.00	80-Q 13630	100-R 13635		
W183-D1 4.00	60-N 13640	80-Q 13650		
W184-D1 4.40	80-Q 13660			
W184-D2 4.40	80-Q 13665			
W185-D1 4.40	46-M 13670 60-Q 13690 80-N 13710 120-W 13730	60-J 13680 60-S 13695 100-N 13720 13725	60-K 13685 80-K 13705 120-Q 13725	
W185-D2 4.40	46-M 13735 60-Q 13755 80-N 13775	60-J 13745 60-S 13760 100-N 13785	60-K 13750 80-K 13770 120-Q 13790	
W186-D1 4.60	46-P 13800 80-N 13820	60-Q 13805 100-P 13825	60-T 13810 120-Q 13830	
W186-D2 4.60	46-Q 13835 80-N 13850	60-Q 13840	60-T 13845	

Shape & \$ List	Grits & Hardnesses UPC # 691019-()			
W187-D1 5.00	60-Q 13855	90-T 13860		
W187-D2 5.00	60-Q 13870 120-T 13890	90-T 13875	120-N 13880	
W188-D2 7.60	60-Q 13905			
W189-D2 9.60	46-Q 13915 90-Q 13930	60-Q 13920	60-S 13925 90-T 13935	
W190-D1 4.40	90-R 13940			
W191-D1 4.40	90-R 13945			
W192-D1 4.40	60-Q 13955			
W193-D1 4.60	80-Q 13975	120-Q 13980		
W193-D2 4.60	120-Q 13995			
W194-D1 4.60	60-N 14000	80-R 14005		
W194-D2 4.60	100-N 14020			
W195-D1 5.00	60-N 14030	60-Q 14035		
W195-D2 5.00	46-N 14040	60-Q 14050	120-O 14055	
W196-D2 5.60	80-L 14060	80-Q 14065	90-T 14070	
W197-D2 10.00	36-Q 14075	60-Q 14085	90-T 14090	
W198-D2 12.40	46-Q 14095			
W199-D1 4.40	100-R 14100			
W200-D1 4.40	60-N 14105	60-Q 14110		
W201-D1 4.40	60-N 14120	60-Q 14125		
W201-D2 4.40	60-N 14135	60-Q 14140		
W202-D1 4.60	60-Q 14145	90-T 14150		
W202-D2 4.60	60-Q 14160	90-T 14165		
W203-D1 4.60	60-N 14175	80-Q 14180		
W203-D2 4.60	60-N 14185	80-Q 14190		
W204-D1 5.00	60-Q 14200			
W204-D2 5.00	46-P 14205	60-N 14210	60-Q 14215	

GRADE SPECIFIC VITRIFIED MOUNTED POINTS (CONTINUED)

D1 = 1/8" X 1-1/2" SHANK

D2 = 1/4" X 1-1/2" SHANK

Shape & \$ List	Grits & Hardnesses UPC # 691019-()	Shape & \$ List	Grits & Hardnesses UPC # 691019-()	Shape & \$ List	Grits & Hardnesses UPC # 691019-()	Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
W205-D2 5.60	54-P 60-K 60-N 14230 14235 14240	W213-D1 5.00	60-M 14345	W220-D2 6.00	54-P 60-N 60-Q 14520 14525 14530	W231-D2 10.00	60-Q 14670		
	60-Q 120-T 14245 14265		60-Q 14350		80-K 14535		W232-D2 12.40	60-N 60-Q 14675 14680	
	W206-D2 6.60	60-Q 14270	W215-D1 4.60		60-S 90-N 90-R 14355 14360 14365	W221-D2 8.40	46-Q 60-N 60-Q 14545 14550 14555	W235-D2 6.00	46-P 60-M 60-Q 14685 14690 14705
	W207-D2 8.00	60-N 60-Q 14275 14280			100-R 14370	W222-D2 10.40	36-Q 60-Q 14565 14575	W236-D2 6.40	36-Q 46-N 46-P 14715 14720 14725
W208-D2 10.00	60-K 60-N 60-P 14295 14300 14305	W215-D2 4.60	90-R 14385	W223-D2 12.80	60-Q 14590	54-J 60-L 60-N 14730 14735 14740			
W209-D2 12.40	46-P 14310	W216-D1 4.60	46-Q 60-N 60-Q 14390 14395 14400	W225-D2 5.60	60-N 60-Q 14600 14605	60-Q 60-T 80-K 14745 14750 14760			
W210-D1 4.60	60-Q 14315	W216-D2 4.60	46-N 60-N 60-Q 14410 14420 14425	W226-D2 6.00	60-Q 14625	W237-D2 7.60	60-N 60-R 14785 14790		
W211-D1 4.60	60-Q 14320	W217-D2 5.00	60-M 60-Q 14440 14445	W227-D2 6.00	60-Q 14630	W238-D2 10.40	60-N 60-Q 14800 14805		
W212-D1 4.60	60-Q 14325	W218-D2 5.00	46-Q 60-N 60-Q 14455 14465 14470	W228-D2 6.40	60-Q 14635	W239-D2 12.80	60-Q 14815		
W212-D2 4.60	60-Q 14335		80-K 14480	W229-D2 7.20	60-N 60-Q 120-O 14640 14645 14650	W242-D2 9.60	36-Q 60-Q 14820 14845		
		W219-D2 5.60	60-N 60-Q 80-K 14490 14495 14500	W230-D2 8.40	46-P 60-Q 14655 14665	W244-D2 16.00	60-Q 14850		

PINK ALUMINUM OXIDE

These vitrified bonded, aluminum oxide mounted points are available from Modern Abrasive in the following hardness range (popular hardnesses are highlighted).

J	K	L	M	N	O	P	Q	R
	very soft				soft		medium	
S	T	U	V	W	X	Y	Z	
	hard			very hard				

They are used infrequently. Typically they are purchased to match the color of medium to very hard wheels imported from foreign competitors.

- “A” shapes are mounted on 1/4" diameter by 1-1/2" long shanks
- “B” shapes are mounted on 1/8" diameter by 1-1/2" long shanks
- “W” shapes are mounted on the shanks specified:
 - D1 = 1/8" diameter by 1-1/2" long shank
 - D2 = 1/4" diameter by 1-1/2" long shank



GRADE SPECIFIC VITRIFIED MOUNTED POINTS (CONTINUED)

D1 = 1/8" X 1-1/2" SHANK

D2 = 1/4" X 1-1/2" SHANK

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
A1 15.20	30-T 14855	36-P 14860	60-Q 14865
	60-U 14866	120-N 14870	
A2 9.20	36-Q 14875	60-Q 14880	
A3 16.40	30-T 14885	36-Q 14895	46-P 14900
	60-Q 14905	60-U 14906	
A4 10.40	36-Q 14910	60-Q 14915	
A5 8.80	30-T 14920	46-R 14925	60-Q 14930
	60-U 14932		
A6 8.80	30-T 14935	60-R 14940	
A11 11.20	30-T 14945	36-Q 14950	60-Q 14955
	60-V 14956		
A12 8.80	30-T 14960	60-Q 14965	60-U 14966
A13 10.40	60-Q 14970		
A14 6.60	60-Q 14975		
A21 7.20	60-Q 14980		
A23 6.60	60-Q 14985		
A24 6.00	46-T 14990	60-Q 14995	
A25 7.20	60-Q 15000		
A26 6.40	60-Q 15005		
A31 8.80	30-T 15010	60-Q 15020	
A32 6.60	60-Q 15025		
A34 7.60	60-Q 15035		
A35 6.40	60-Q 15040		
A36 8.80	36-T 15045		
A37 6.60	36-Q 15050	60-U 15052	60-Q 15055
A38 6.00	36-Q 15060	60-Q 15065	
A39 5.00	36-Q 15070	60-R 15080	
A40 6.40	60-Q 15085		
B41 6.40	60-Q 15090		
B42 6.00	60-R 15095		
B43 5.60	60-T 15100		
B44 5.60	60-W 15105	80-S 15110	120-R 15115
B45 5.60	60-T 15120		
B46 5.60	100-R 15125		
B51 6.00	60-M 15130	120-R 15135	
B52 6.00	80-T 15140	100-U 15145	120-R 15150
B53 6.00	60-T 15155		
B54 5.60	60-U 15160		

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
B55 5.00	80-T 15165		
B62 5.60	60-R 15170		
B72 5.00	60-R 15175		
B73 5.00	60-R 15180		
B81 5.60	60-T 15185		
B82 5.00	100-T 15190		
B91 6.00	60-T 15195		
B96 5.00	80-T 15200		
B97 5.60	80-T 15205	120-X 15207	
B98 5.00	100-R 15210		
B101 6.40	60-L 15215		
B102 6.00	60-T 15220		
B103 5.60	80-Q 15225		
B104 5.60	60-R 15230		
B114 5.60	100-T 15235		
B121 5.60	60-T 15240		
B122 5.60	80-R 15245	100-T 15250	
B123 5.00	80-R 15255	100-T 15260	
B124 5.00	100-T 15265	60-T 15267	
B125 5.20	100-S 15270		
B131 4.40	60-Q 15275		
B132 4.40	60-T 15280		
B133 4.40	60-T 15290		
B134 4.40	60-R 15295		
B135 4.40	80-R 15300	80-U 15301	
B136 4.40	60-T 15305		
W142-D1 4.00	100-R 15310	120-X 15315	
W143-D1 4.00	100-T 15320		
W144-D1 4.00	80-T 15325		
W145-D1 4.40	80-T 15335	120-X 15345	
W146-D1 4.40	80-W 15350	100-T 15355	
W149-D1 4.00	80-T 15358		
W151-D1 4.00	80-R 15360		
W152-D1 4.00	80-T 15365		
W153-D1 4.40	120-X 15375		
W154-D1 4.40	100-T 15390	120-X 15395	
W157-D1 4.00	90-R 15400		
W158-D1 4.00	90-R 15405		

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
W160-D1 4.00	60-T 15410	100-S 15420	
W161-D1 4.40	60-T 15425		
W162-D1 4.40	60-Q 15430	60-T 15435	
W163-D1 4.40	60-Q 15445	60-W 15455	
	120-Q 15460	120-X 15465	
W163-D2 4.40	60-Q 15470	60-W 15480	
	120-Q 15485	120-X 15490	
W164-D1 4.60	60-T 15495	60-W 15500	
W164-D2 4.60	60-T 15505	60-W 15510	
W167-D1 4.00	120-X 15515		
W168-D1 4.40	60-N 15520		
W169-D1 4.40	60-R 15525		
W170-D1 4.40	60-W 15535		
W170-D2 4.40	60-W 15540		
W171-D1 4.60	60-R 15545		
W171-D2 4.60	60-R 15550		
W172-D1 5.60	60-R 15555		
W173-D1 4.00	100-R 15560		
W175-D1 4.40	60-L 15565		
W175-D2 4.40	60-L 15570		
W176-D1 4.40	60-R 15575	60-T 15580	100-M 15585
W176-D2 4.40	60-R 15590	60-T 15595	
W177-D1 4.60	60-T 15605		
W177-D2 4.60	60-T 15610		
W178-D1 5.00	60-T 15615	60-W 15620	
W178-D2 5.00	46-T 15625	60-N 15630	80-L 15635
W179-D2 6.40	46-T 15640	60-T 15645	80-T 15650
W183-D1 4.00	60-T 15655		
W185-D1 4.40	60-L 15665	60-Q 15670	60-T 15675
W185-D2 4.40	60-L 15690	60-Q 15695	60-T 15700
W186-D1 4.60	46-Q 15710	60-T 15720	
W186-D2 4.60	60-T 15730		
W187-D1 5.00	60-Q 15740		
W187-D2 5.00	60-Q 15745	60-T 15750	120-X 15755
W188-D2 7.60	46-L 15760	46-P 15765	60-R 15770
W189-D2 9.60	46-T 15775		
W190-D1 4.40	90-R 15780		

Shape & \$ List	Grits & Hardnesses UPC # 691019-()			
W191-D1 4.40	90-R 15785			
W196-D2 5.60	60-T 15790			
W197-D2 10.00	30-T 15795	46-T 15800	60-R 15805	
W201-D1 4.40	80-T 15810			
W201-D2 4.40	80-T 15815			
W203-D1 4.60	60-K 15830	80-K 15835	120-K 15840	
W203-D2 4.60	60-R 15850			
W204-D2 5.00	60-T 15860	80-L 15865		
W205-D2 5.60	46-T 15870	60-Q 15880		
W206-D2 6.60	60-T 15885			
W207-D2 8.00	30-T 15895	60-O 15905	60-Q 15910	
W209-D2 12.40	30-Q 15915			
W210-D1 4.60	80-T 15920			
W211-D1 4.60	80-T 15925			
W215-D1 4.60	100-W 15930			
W215-D2 4.60	100-W 15935			
W216-D1 4.60	60-R 15940			
W216-D2 4.60	60-T 15945			
W217-D2 5.00	60-Q 15955			
W218-D2 5.00	60-K 15965			
W219-D2 5.60	60-T 15975			
	30-T 15980	36-R 15985	60-L 15990	
W220-D2 6.00	60-Q 15995			
W221-D2 8.40	30-R 16010			
W222-D2 10.40	30-U 16025	60-T 16030		
W223-D2 12.80	80-P 16035			
W225-D2 5.60	60-R 16040			
W226-D2 6.00	60-Q 16050			
W227-D2 6.00	60-Q 16055			
W229-D2 7.20	60-Q 16065			
W231-D2 10.00	60-T 16070			
W232-D2 12.40	60-Q 16075			
W235-D2 6.00	60-Q 16080			
W236-D2 6.40	30-T 16085	60-N 16095	60-P 16100	
W237-D2 7.60	30-T 16105	36-R 16110		
W238-D2 10.40	46-Q 16115			
W242-D2 9.60	36-Q 16120	60-Q 16135		

GRADE SPECIFIC VITRIFIED MOUNTED POINTS (CONTINUED)

GRAYISH-WHITE (32A) ALUMINUM OXIDE

These vitrified bonded, aluminum oxide mounted points are available from Modern Abrasive in the following hardness range (popular hardnesses are highlighted).

J	K	L	M	N	O	P	Q	R
	very soft			soft			medium	
	S	T	U	V	W			
		hard		very hard				

They are used to provide equivalent product to Norton (registered trademark) 32A specifications, which are premium priced but manufactured in Mexico. They are commonly used in precision or internal grinding operations in soft to very soft hardnesses or for heavy deburring in hard specifications.

“A” shapes are mounted on 1/4" diameter by 1-1/2 long shanks
 “B” shapes are mounted on 1/8" diameter by 1-1/2 long shanks
 “W” shapes are mounted on the shanks specified:
 D1 = 1/8" diameter by 1-1/2 long shank
 D2 = 1/4" diameter by 1-1/2 long shank



Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
A1 16.72	30-U 16140	36-T 16145	46-T 16150
A2 10.12	36-T 16155	60-T 16160	60-U 16165
A3 18.04	30-T 16175	46-U 16185	60-U 16190
A4 11.44	36-T 16195	60-Q 16200	
A11 12.32	30-U 16205	36-N 16210	80-N 16215
A12 9.68	46-T 16230	60-U 16235	100-U 16240
A14 7.26	60-L 16250	60-U 16255	
A15 9.24	90-U 16260		
A21 7.92	60-T 16265		
A22 7.04	36-T 16270		
A23 7.26	60-U 16275		
A24 6.60	60-U 16280		
A25 7.92	36-T 16285		
A26 7.04	36-T 16290	60-T 16295	
A32 7.26	60-N 16310		
A34 8.36	36-T 16315		
A36 9.68	36-T 16320		
A37 7.26	46-U 16325	60-Q 16330	
A38 6.60	36-T 16335	60-U 16350	
A39 5.50	46-J 16360	60-U 16370	

Shape & \$ List	Grits & Hardnesses UPC # 691019-()	
A40 7.04	36-T 16375	
B41 7.04	60-U 16380	
B42 6.60	60-U 16385	100-U 16390
B44 6.16	100-V 16395	
B46 6.16	90-U 16400	
B52 6.60	80-N 16405	100-U 16410
B53 6.60	100-U 16420	
B54 6.16	60-U 16425	
B55 5.50	100-U 16430	
B63 5.50	100-U 16435	
B72 5.50	90-U 16445	
B73 5.50	90-U 16450	
B81 6.16	80-L 16455	100-U 16460
B82 5.50	100-U 16465	
B91 6.60	90-U 16475	
B96 5.50	80-O 16480	100-U 16485
B97 6.16	100-U 16490	
B98 5.50	100-U 16495	
B101 7.04	100-U 16505	
B121 6.16	80-V 16515	100-U 16520
B122 6.16	60-Q 16525	100-U 16530

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
B123 5.50	100-U 16535		
B124 5.50	120-U 16540		
B131 4.84	60-M 16555	60-T 16560	
B132 4.84	60-Q 16570	60-T 16575	
B133 4.84	80-T 16585		
B135 4.84	60-U 16590		
B136 4.84	60-U 16600		
W142-D1 4.40	100-U 16610		
W143-D1 4.40	120-U 16615		
W144-D1 4.40	80-O 16620	100-Q 16625	100-U 16630
W145-D1 4.84	100-L 16640	100-U 16645	
W146-D1 4.84	100-U 16650		
W152-D1 4.40	100-U 16655		
W153-D1 4.84	100-U 16660		
W160-D1 4.40	60-J 16670	80-L 16675	80-V 16680
W161-D1 4.84	100-K 16685	120-O 16690	120-U 16695
W162-D1 4.84	100-L 16700		
W163-D1 4.84	60-Q 16705	60-U 16710	
W163-D2 4.84	60-N 16715	60-P 16720	60-U 16725
	80-P 16730	120-O 16735	
	60-P 16745	60-U 16750	80-P 16755

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
W164-D1 5.06	60-Q 16770	60-U 16775	
W164-D2 5.06	60-Q 16790	60-U 16795	
W168-D1 4.84	60-L 16805		
W174-D1 4.40	80-M 16830		
W175-D1 4.84	46-K 16835	60-L 16840	60-P 16845
	80-L 16850	80-N 16855	
W175-D2 4.84	46-K 16860	60-L 16865	60-P 16870
	80-L 16875	80-N 16880	
W176-D1 4.84	60-L 16885	60-N 16890	60-Q 16895
	60-U 16900	100-U 16910	
W176-D2 4.84	60-L 16915	60-N 16920	60-Q 16925
	60-U 16930	100-U 16940	
W177-D1 5.06	60-U 16947	80-N 16950	
W177-D2 5.06	60-U 16960	80-N 16965	
W178-D1 5.50	60-N 16970		
W178-D2 5.50	60-N 16975		
W179-D2 7.04	60-Q 16990		
W182-D1 4.40	100-U 16995		
W184-D1 4.84	120-T 17010		
W184-D2 4.84	120-T 17015		

GRADE SPECIFIC VITRIFIED MOUNTED POINTS (CONTINUED)
D1 = 1/8" X 1-1/2" SHANK **D2 = 1/4" X 1-1/2" SHANK**

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
W185-D1 4.84	60-J	60-N	60-P
	17025	17030	17035
	80-K	80-U	100-U
	17040	17045	17060
W185-D2 4.84	60-J	60-N	60-P
	17075	17080	17085
	80-K	80-U	100-U
	17090	17095	17110
W186-D1 5.06	60-M		
	17125		
W186-D2 5.06	60-M		
	17130		
W187-D2 5.50	46-T	60-U	
	17155	17160	
W188-D2 8.36	36-U		
	17170		
W189-D2 10.56	60-S		
	17200		
W194-D2 5.06	60-L		
	17240		

Shape & \$ List	Grits & Hardnesses UPC # 691019-()	
W195-D1 5.50	80-L	
	17250	
W195-D2 5.50	80-L	
	17255	
W196-D2 6.16	30-T	
	17260	
W197-D2 11.00	30-U	
	17270	
W199-D1 4.84	60-U	
	17285	
W200-D1 4.84	60-U	
	17290	
W203-D1 5.06	60-O	80-L
	17310	17320
W203-D2 5.06	60-K	60-O
	17330	17335
W204-D1 5.50	46-L	
	17345	
W204-D2 5.50	60-K	
	17375	

Shape & \$ List	Grits & Hardnesses UPC # 691019-()	
W205-D2 6.16	30-T	60-L
	17400	17405
W206-D2 7.26	30-U	
	17420	
W207-D2 8.80	30-U	
	17430	
W208-D2 11.00	30-U	60-O
	17445	17450
W212-D2 5.06	46-L	
	17485	
W213-D1 5.50	60-K	
	17495	
W215-D1 5.06	80-U	
	17500	
W216-D2 5.06	100-U	
	17515	
W217-D2 5.50	36-T	
	17520	
W218-D2 5.50	60-J	
	17535	

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
W220-D2 6.60	60-N	80-L	120-U
	17545	17550	17555
	36-T	60-N	60-U
	17565	17570	17575
W221-D2 9.24	30-U		
	17585		
W222-D2 11.44	30-U	60-U	
	17595	17605	
W223-D2 14.08	36-T		
	17610		
W227-D2 6.60	30-U	46-N	60-K
	17630	17640	17645
W236-D2 7.04	30-U	46-R	
	17685	17705	
W237-D2 8.36	30-T	30-U	
	17730	17740	
W238-D2 11.44	60-O	30-R	
	17745	17750	

BLACK SILICON CARBIDE

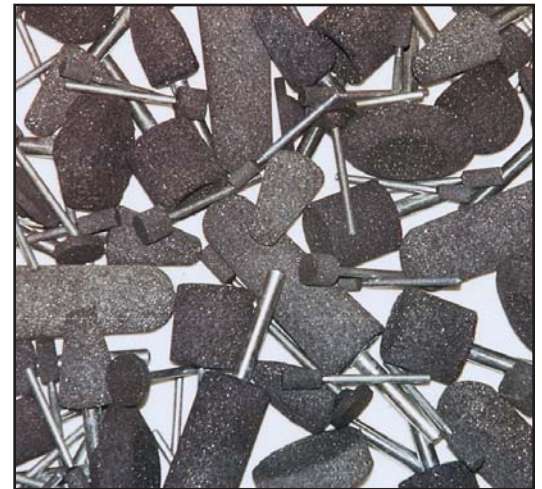
These vitrified bonded, silicon carbide mounted points are available from Modern Abrasive in the following hardness range (popular hardnesses are highlighted).

K L M N O P Q R S T U V W
 very soft soft medium hard very hard

They are sometimes used for grinding iron but usually used to grind non-ferrous materials. They are not recommended for grinding steel. It is sometimes difficult to tell from a specification whether a wheel is of black or of green silicon carbide. Black is often indicated as follows:

C 37C BC SC 2C 49C 6C 88C 75C

- “A” shapes are mounted on 1/4" diameter by 1-1/2 long shanks
- “B” shapes are mounted on 1/8" diameter by 1-1/2 long shanks
- “W” shapes are mounted on the shanks specified:
 D1 = 1/8" diameter by 1-1/2 long shank
 D2 = 1/4" diameter by 1-1/2 long shank



Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
A1 17.48	36-N	36-R	36-T
	17785	17790	17795
	46-Q	60-Q	
	17800	17805	
A2 10.60	46-S	60-Q	
	17815	17820	
A3 18.88	24-S	30-S	36-N
	17825	17830	17835
	36-Q	36-W	46-Q
	17840	17845	17850
	46-S	60-Q	80-N
	17855	17860	17865
A4 11.96	30-Q	46-Q	60-Q
	17873	17875	17880
A5 10.12	36-Q	36-S	36-U
	17885	17890	17895
	46-Q	60-P	
	17905	17910	
A6 10.12	30-Q		
	17915		

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
A11 12.88	30-Q	36-Q	36-S
	17920	17925	17930
	36-T	36-J	36-W
	17935	17940	17945
	60-Q	80-N	
	17955	17960	
A12 10.12	36-R	60-M	80-Q
	17965	17985	17990
	120-Q		
	17995		
A14 7.60	46-Q	60-Q	
	18010	18015	
A15 9.68	60-Q		
	18020		
A22 7.36	36-S	100-Q	
	18030	18040	
A23 7.60	36-R	60-Q	
	18050	18055	
A24 6.92	60-R		
	18065		

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
A25 8.28	36-Q	60-Q	
	18070	18075	
A26 7.36	36-Q		
	18080		
A31 10.12	30-Q	36-R	60-Q
	18090	18100	18105
A32 7.60	46-Q		
	18110		
A33 7.36	30-Q	46-Q	
	18125	18130	
A34 8.76	36-S	60-Q	
	18145	18150	
A35 7.36	80-T		
	18155		
A36 10.12	36-Q	36-S	60-Q
	18165	18170	18175
A37 7.60	36-Q	60-Q	
	18180	18190	
A38 6.92	30-Q	36-T	60-Q
	18200	18205	18210

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
A39 5.76	36-Q	80-P	
	18215	18225	
A40 7.36	46-L	60-S	
	18230	18235	
B41 7.36	60-Q		
	18240		
B44 6.44	100-P		
	18255		
B45 6.44	80-Q		
	18260		
B46 6.44	80-Q		
	18265		
B47 5.76	100-S		
	18270		
B51 6.92	60-Q		
	18275		
B52 6.92	46-Q	46-S	80-Q
	18280	18285	18290
	120-Q		
	18295		

GRADE SPECIFIC VITRIFIED MOUNTED POINTS (CONTINUED)
D1 = 1/8" X 1-1/2" SHANK **D2 = 1/4" X 1-1/2" SHANK**

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
B53	46-Q	80-Q	
	18300	18310	
6.92	100-U	120-Q	
	18315	18320	
B54	80-T		
	18325		
6.44	100-Q		
B55	18330		
5.76	60-Q		
B61	18335		
6.92	60-Q		
B62	18340		
6.44	60-Q		
B63	18345		
5.76	60-Q		
B70	18350		
6.44	80-Q		
B71	18355		
6.44	80-Q		
B72	18360		
5.76	80-Q		
B73	18365		
5.76	120-T		
B74	18370		
5.76	80-R		
B81	18375		
6.44	100-P		
B84	18385		
5.76	36-P	80-P	
B91	18395	18400	
6.92	100-Q		
B95	18405		
5.76	100-Q		
B96	18410		
5.76	80-Q		
B97	18415		
6.44	100-Q		
B98	18420		
5.76	80-Q		
B103	18430		
6.44	80-Q		
B104	18435		
6.44	60-P		
B111	18445		
6.92	80-T		
B114	18455		
6.44	60-Q	120-N	120-R
B121	18460	18465	18470
6.44	80-Q	120-Q	
B122	18480	18490	
6.44	60-P		
B123	18495		
5.76	120-Q		
B124	18500		
5.76	60-Q	80-N	
B131	18505	18510	
5.08	60-Q	120-Q	
B132	18515	18520	
5.08	46-Q	80-Q	
B134	18530	18535	
5.08	46-Q	80-T	
B135	18540	18545	
5.08	80-N	80-Q	
B136	18555	18560	
5.08	100-Q	120-T	
W142-D1	18570	18575	
4.60	100-S		
W143-D1	18580		
4.60	80-M	100-Q	
W144-D1	18590	18595	
4.60	100-Q		
W145-D1	18600		
5.08	60-Q		
W146-D1	18605		
5.08	100-Q		
W151-D1	18610		
4.60	100-Q		
W152-D1	18620		
4.60	120-Q		
W153-D1	18630		
5.08			

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
W154-D1	60-Q	100-Q	
	18640	18645	
5.08	60-Q	80-N	
W160-D1	18655	18660	
4.60	60-Q		
W162-D1	18675		
5.08	60-Q	120-Q	
W163-D1	18695	18705	
5.08	60-Q		
W163-D2	18710		
5.08	60-R		
W164-D1	18725		
5.28	60-R	80-N	
W164-D2	18735	18740	
5.28	120-K	120-Q	
W170-D1	18750	18755	
5.08	100-Q		
W173-D1	18770		
4.60	80-Q	80-T	100-K
W175-D1	18790	18795	18800
5.08	80-Q	80-T	100-K
W175-D2	18805	18810	18815
5.08	60-Q	120-Q	
W176-D1	18825	18830	
5.08	60-Q	120-Q	
W176-D2	18840	18845	
5.08	46-Q	60-Q	
W177-D1	18850	18855	
5.28	60-R		
W178-D2	18870		
5.76	46-Q	80-Q	
W179-D2	18880	18885	
7.36	46-Q	60-N	60-Q
	18930	18935	18940
W185-D1	80-Q	80-T	100-N
5.08	18945	18950	18955
	46-Q	60-N	60-Q
W185-D2	18970	18975	18980
5.08	80-Q	80-T	100-N
	18985	18990	18995
W186-D1	60-Q		
	19015		
W186-D2	36-P	60-N	60-Q
5.28	19020	19025	19030
	36-Q	36-S	46-L
W187-D2	19040	19045	19050
	46-S	60-Q	
	19055	19060	
W188-D2	36-Q	60-P	
8.76	19065	19080	
W189-D2	36-Q	36-U	60-Q
11.04	19085	19090	19095
W191-D1	100-Q		
	19105		
W194-D2	36-Q		
5.28	19115		
W196-D2	46-S	60-R	
6.44	19130	19135	
W197-D2	30-Q	46-Q	
	19145	19150	
11.52	80-P		
W200-D1	19160		
5.08	100-Q		
W201-D1	19170		
5.08	30-Q		
W203-D2	19210		
5.28	60-P	36-P	36-S
W204-D1	19230	19235	19240
5.76	60-P	60-R	
W204-D2	19255	19260	
5.76	36-S	36-U	60-Q
W205-D2	19285	19290	19295
6.44	36-S	36-W	60-Q
W207-D2	19310	19315	19320
9.20	30-Q	36-T	46-Q
W208-D2	19325	19340	19345
11.52	80-Q		
W211-D1	19365		
5.28	60-Q	100-P	
W215-D1	19375	19380	
5.28			

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
W215-D2	60-Q	100-P	
	19390	19395	
5.28	60-Q	80-N	
W216-D1	19400	19405	
5.28	60-Q		
W216-D2	19410		
5.28	100-Q		
W217-D2	19425		
5.76	30-M	30-Q	30-S
	19430	19435	19440
W218-D2	46-Q	60-R	
	19450	19455	
5.76	80-N	80-T	
	19460	19465	
	30-Q	36-S	36-T
W220-D2	19475	19480	19485
	46-Q	60-N	60-Q
6.92	19495	19500	19505
W221-D2	30-Q	36-S	
	19520	19535	
9.68	36-S	60-Q	
W222-D2	19545	19565	
11.96	30-Q		
W223-D2	19570		
14.60	36-S	46-Q	80-Q
W225-D2	19575	19585	19590
6.44	60-N		
W226-D2	19600		
6.92	36-R	36-T	60-Q
W227-D2	19605	19610	19615
6.92	30-Q		
W228-D2	19620		
7.36	30-Q		
W229-D2	19630		
8.28	30-Q	36-U	46-P
W230-D2	19650	19655	19660
9.68	30-Q		
W231-D2	19670		
11.52	30-Q	36-S	60-Q
	19690	19700	19705
W235-D2	60-T		
6.92	19710		
	30-Q	36-S	46-P
W236-D2	19715	19720	19725
	60-N	60-P	60-Q
7.36	19730	19735	19740
	30-Q	36-S	60-Q
W237-D2	19750	19755	19760
	8.76	19770	19775
W238-D2	19770	19775	19780
11.96	36-R		
W239-D2	19790		
14.72	30-Q	36-T	80-P
W242-D2	19795	19800	19810
11.04	80-P		
W243-D2	19815		
14.72	30-Q		
W244-D2	19820		
18.40			

GRADE SPECIFIC VITRIFIED MOUNTED POINTS

GREEN SILICON CARBIDE

These vitrified bonded, silicon carbide mounted points are available from Modern Abrasive in the following hardness range (popular hardnesses are highlighted).

I J K L M N O P Q R S T U
 soft medium hard very hard

They are typically used for grinding hard, brittle materials. It is sometimes difficult to tell from a specification whether a wheel is of black or of green silicon carbide. Green is often indicated as follows:

GC 39C 1C 49GC 5C 80C

“A” shapes are mounted on 1/4" diameter by 1-1/2 long shanks

“B” shapes are mounted on 1/8" diameter by 1-1/2 long shanks

“W” shapes are mounted on the shanks specified:

D1 = 1/8" diameter by 1-1/2 long shank

D2 = 1/4" diameter by 1-1/2 long shank



Shape & \$ List	Grits & Hardnesses UPC # 691019-()	Shape & \$ List	Grits & Hardnesses UPC # 691019-()	Shape & \$ List	Grits & Hardnesses UPC # 691019-()	Shape & \$ List	Grits & Hardnesses UPC # 691019-()
A1 19.00	36-O 19825	B54 7.00	60-M 20025	W158-D1 5.00	120-R 20235	W197-D2 12.52	60-R 20650
A2 11.52	46-P 19835	B73 6.24	120-Q 20030	W160-D1 5.00	80-L 80-Q 120-P 20245 20250 20255	W200-D1 5.52	46-Q 100-Q 20670 20680
A3 20.52	36-O 60-M 60-Q 19840 19845 19850	B82 6.24	100-Q 20035	W161-D1 5.52	80-R 20260	W201-D1 5.52	120-M 20690
A4 13.00	80-N 19855	B83 6.24	100-Q 20040	W162-D1 5.52	100-M 20270	W201-D2 5.52	120-M 20700
A5 11.00	36-O 60-L 60-P 19860 19865 19870	B97 7.00	60-Q 80-Q 100-L 20050 20055 20060	W163-D1 5.52	60-M 80-Q 120-Q 20275 20280 20285	W202-D2 5.76	80-P 20725
A11 14.00	80-N 19875	B101 8.00	80-Q 20065	W164-D1 5.76	80-N 80-Q 20305 20310	W203-D2 5.76	80-M 100-Q 20740 20745
A12 11.00	60-M 19880	B103 7.00	120-Q 20075	W164-D2 5.76	80-N 80-Q 20315 20320	W204-D1 6.24	80-K 80-M 100-N 20755 20760 20765
A13 13.00	60-M 60-R 19885 19890	B105 6.24	120-P 20080	W168-D2 5.52	120-J 20325	W204-D2 6.24	80-K 80-M 100-N 20775 20780 20785
A14 8.24	60-M 19895	B114 7.00	100-Q 20085	W171-D1 5.76	60-O 20340	W207-D2 10.00	60-M 20790
A23 8.24	60-M 19910	B121 7.00	80-Q 20090	W175-D1 5.52	46-L 100-L 120-P 20355 20360 20370	W208-D2 12.52	60-R 20795
A24 7.52	46-P 19915	B122 7.00	120-O 20100	W175-D2 5.52	46-L 100-L 20380 20385	W215-D1 5.76	80-K 80-Q 20805 20810
A26 8.00	46-P 19925	B123 6.24	80-N 80-Q 120-Q 20105 20110 20115	W176-D1 5.52	60-M 20405	W216-D1 5.76	80-M 80-Q 20820 20825
A31 11.00	60-M 80-Q 19930 19935	B124 6.24	120-O 20125	W176-D2 5.52	60-M 20420	W216-D2 5.76	46-Q 80-M 80-Q 20830 20840 20845
A33 8.00	80-M 19940	B131 5.52	80-P 20130	W178-D1 6.24	60-N 20435	W218-D2 6.24	80-M 80-P 100-K 20860 20865 20870
A34 9.52	60-M 19945	B134 5.52	80-Q 20135	W182-D1 5.00	100-N 20455	W220-D2 7.52	36-M 46-R 60-M 20875 20880 20885
A36 11.00	60-O 19950	B135 5.52	80-L 20140	W184-D2 5.52	60-P 20475		60-Q 80-M 120-K 20890 20895 20910
A37 8.24	60-O 19960	B136 5.52	80-L 20145	W185-D1 5.52	46-M 60-M 60-Q 20485 20490 20495	W221-D2 10.52	36-M 60-M 20915 20920
A38 7.52	60-M 19965	W142-D1 5.00	120-L 20150		80-Q 100-L 120-O 20500 20510 20520	W222-D2 13.00	60-P 20925
A39 6.24	60-M 19975	W143-D1 5.00	100-R 20160	W185-D2 5.52	60-M 60-Q 80-Q 20530 20535 20540	W226-D2 7.52	36-M 20930
B41 8.00	60-M 19980	W144-D1 5.00	120-K 120-Q 20170 20175		100-L 120-M 120-O 20550 20555 20560	W227-D2 7.52	60-M 20940
B42 7.52	46-R 19985	W145-D1 5.52	80-Q 20185	W186-D1 5.76	80-Q 20565	W229-D2 9.00	60-L 20945
B44 7.00	120-Q 19995	W146-D1 5.52	100-L 100-Q 20190 20195	W187-D1 6.24	60-N 20580	W230-D2 10.52	80-M 20950
B51 7.52	80-M 20000	W152-D1 5.00	100-K 20200	W188-D2 9.52	60-R 20600	W235-D2 7.52	60-L 60-R 80-M 20960 20965 20970
B52 7.52	60-L 120-O 20010 20015	W153-D2 5.52	80-L 120-P 20210 20215	W189-D2 12.00	60-R 20615		36-O 46-K 60-M 20975 20980 20990
B53 7.52	100-M 20020	W154-D1 5.52	100-Q 20220	W194-D2 5.76	80-Q 20635	W236-D2 8.00	60-V 21000

GRADE SPECIFIC RESIN MOUNTED POINTS

These resin bonded, aluminum oxide mounted points are available from Modern Abrasive in the following hardness range (popular hardnesses are highlighted).

N O P **Q** R **S** T **U** V W
 soft medium hard very hard

Resin bonded Aluminum Oxide (AO) mounted points are typically used in medium hardness for stock removal of stainless steel and other heat sensitive materials.
 Zirconium/Aluminum Oxide (Zirc) wheels typically last longer than resin bonded Aluminum Oxide (AO) wheels.



“A” shapes are mounted on 1/4" diameter by 1-1/2 long shanks
 “B” shapes are mounted on 1/8" diameter by 1-1/2 long shanks
 “W” shapes are mounted on the shanks specified:
 D1 = 1/8" diameter by 1-1/2 long shank
 D2 = 1/4" diameter by 1-1/2 long shank

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
A1 A/O 22.40	36-Q	36-S	60-Q
A1 Zirc 25.76	24-W	30-V	
A2 A/O 16.00	60-Q		
A3 A/O 24.00	24-R	24-U	30-S
	21055	21060	21065
	36-N	36-Q	24-R
	21070	21075	21076
	46-O	60-Q	120-Q
	21080	21085	21090
A3 Zirc 27.60	24-W	30-T	30-V
	21061	21066	21067
A4 A/O 13.20	30-R		
	21095		
A5 A/O 15.60	36-Q	60-Q	
	21099	21100	
A5 Zirc 17.94	30-T		
	21096		
A6 A/O 15.60	46-Q		
	21105		
A11 A/O 18.00	24-P	24-S	36-Q
	21110	21115	21120
	36-S	36-U	60-Q
	21125	21130	21135
	120-Q		
	21140		
A11 Zirc 20.70	24-W	30-T	30-W
	21116	21118	21119
A12 A/O 15.60	30-R	60-Q	60-T
	21145	21150	21155
A13 A/O 17.20	46-Q		
	21160		
A14 A/O 13.60	60-Q		
	21165		
A15 A/O 15.20	46-S	60-R	
	21170	21175	
A21 A/O 14.00	36-Q	60-Q	
	21185	21190	
A23 A/O 13.60	36-Q	60-Q	
	21200	21205	
A24 A/O 12.00	46-S	60-R	
	21210	21215	

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
A25 A/O 14.00	36-R	46-Q	60-Q
	21220	21225	21230
A26 A/O 12.40	36-S	60-R	
	21235	21240	
A31 A/O 16.00	36-S	60-Q	
	21250	21255	
A32 A/O 12.80	60-Q		
	21260		
A33 A/O 12.00	60-Q		
	21265		
A34 A/O 13.20	36-R	60-Q	
	21270	21275	
A36 A/O 14.80	36-Q	36-S	46-T
	21280	21285	21290
	60-S		
	21295		
A37 A/O 11.60	36-Q		
	21300		
A38 A/O 12.00	24-Q	36-Q	46-O
	21310	21315	21320
	60-Q		
	21325		
A39 A/O 10.40	36-R	46-P	60-Q
	21340	21345	21350
A40 A/O 12.40	36-R		
	21345		
B41 A/O 12.40	60-Q		
	21350		
B42 A/O 12.00	46-S	60-Q	
	21355	21360	
B43 A/O 10.40	120-Q		
	21355		
B44 A/O 10.40	60-T		
	21370		
B46 A/O 10.40	120-Q		
	21385		
B51 A/O 12.00	46-Q	120-R	
	21390	21395	
B52 A/O 12.00	46-Q	60-Q	120-Q
	21400	21405	21415
B53 A/O 12.00	46-Q		
	21420		
B61 A/O 10.80	60-Q		
	21425		

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
B70 A/O 10.40	60-S		
	21430		
B71 A/O 10.40	60-Q		
	21435		
B72 A/O 10.00	120-Q		
	21440		
B81 A/O 10.40	46-R	80-S	
	21450	21455	
B90 A/O 11.20	60-Q		
	21460		
B91 A/O 12.00	60-Q		
	21465		
B92 A/O 10.00	60-Q		
	21470		
B96 A/O 10.00	80-Q		
	21475		
B97 A/O 10.40	60-R		
	21480		
B101 A/O 12.40	60-Q		
	21490		
B103 A/O 10.40	60-R		
	21495		
B111 A/O 12.00	60-Q		
	21510		
B112 A/O 11.20	60-Q		
	21515		
B121 A/O 11.20	36-R	60-Q	
	21520	21525	
B122 A/O 10.40	80-Q		
	21530		
B123 A/O 10.00	60-R		
	21535		
B124 A/O 10.00	100-Q		
	21540		
B125 A/O 10.40	60-W		
	21545		
B131 A/O 9.20	60-Q		
	21550		
B135 A/O 9.20	60-Q		
	21560		
B136 A/O 8.40	80-Q		
	21570		
W142 A/O 8.00	100-R		
	21575		

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
W143 A/O 8.00	100-Q		
	21580		
W144 A/O 8.00	80-Q		
	21585		
W145 A/O 8.40	80-Q		
	21590		
W146 A/O 9.20	46-R		
	21595		
W154 A/O 9.20	80-R		
	21605		
W161 A/O 8.40	80-Q		
	21610		
W162 A/O 8.40	60-Q		
	21615		
W163 A/O 9.20	46-S	60-U	
	21620	21625	
W164-D1 A/O 10.00	46-S	60-R	
	21630	21635	
W164-D2 A/O 10.00	60-S	46-W	60-R
	21640	21645	21650
W164-D2 Zirc 11.50	36-V		
	21629		
W171-D1 A/O 10.00	36-Q		
	21665		
W171-D2 A/O 10.00	80-U		
	21675		
W175-D1 A/O 8.40	60-W		
	21685		
W175-D2 A/O 8.40	60-Q		
	21690		
W176-D1 A/O 8.40	36-T	60-Q	120-R
	21695	21700	21705
W177-D1 A/O 10.00	36-Q	60-Q	
	21715	21720	
W177-D2 A/O 10.00	36-Q	60-Q	
	21725	21730	
W178-D1 A/O 11.20	46-S		
	21735		
W178-D2 A/O 11.20	46-S	60-Q	
	21740	21750	
W179-D2 A/O 12.00	24-W	36-S	36-U
	21755	21760	21765
	46-Q	46-S	60-R
	21770	21775	21780

GRADE SPECIFIC RESIN MOUNTED POINTS (CONTINUED)

D1 = 1/8" X 1-1/2" SHANK

D2 = 1/4" X 1-1/2" SHANK

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
W179-D2 Zirc 13.80	36-U 21766		
W182-D1 A/O 8.00	60-Q 21795		
W182-D1 A/O 8.00	60-Q 21795		
W183-D1 A/O 8.00	46-R 21810		
W185-D1 A/O 9.20	36-R 60-Q 21820 21825		
W185-D2 A/O 9.20	60-Q 21840		
W186-D2 A/O 10.00	60-Q 21850		
W187-D2 A/O 11.20	36-R 60-Q 21855 21865		
W188-D2 A/O 12.80	36-R 60-Q 120-Q 21875 21880 21885		
W188-D2 Zirc 12.80	30-V 21874		
W189-D2 A/O 15.20	24-R 30-P 36-Q 21890 21895 21900		
	36-U 46-S 60-Q 21905 21920 21925		
	60-S 120-U 21930 21935		
W189-D2 Zirc 15.20	30-V 21899		
W195-D2 A/O 10.40	36-R 21950		
W196-D2 A/O 11.60	36-R 21955		
W197-D2 A/O 15.60	24-R 30-Q 30-T 21970 21975 21980		
	46-Q 60-R 21985 21990		

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
W197-D2 Zirc 17.94	30-V 21981		
W198-D2 Zirc 18.40	36-R 21995		
W200-D1 A/O 8.40	46-U 60-Q 22005 22010		
W200-D2 A/O 8.40	46-U 60-Q 22020 22025		
W203-D2 A/O 9.60	60-Q 22040		
W204-D2 A/O 10.40	36-R 60-Q 22050 22055		
W205-D2 A/O 11.60	36-R 60-Q 22060 22065		
W206-D2 A/O 12.40	46-P 22070		
W207-D2 A/O 13.20	24-V 30-P 36-S 22075 22080 22085		
	36-U 22090		
W208-D2 A/O 15.60	30-R 30-T 46-S 22100 22105 22110		
	60-Q 60-S 22115 22120		
	60-Q 22109		
W208-D2 Zirc 17.94	60-Q 22109		
W209-D2 A/O 18.40	36-T 22125		
W212-D1 A/O 8.80	60-W 22145		
W215-D1 A/O 8.80	60-R 60-W 80-T 22150 22160 22165		
W217-D2 A/O 9.20	36-Q 80-R 22180 22185		
W218-D2 A/O 10.00	24-Q 36-Q 60-Q 22190 22195 22200		

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
W219-D2 A/O 10.80	36-S 22205		
W220-D2 A/O 12.00	36-R 46-Q 60-Q 22220 22225 22230		
W220-D2 Zirc 13.80	24-W 30-V 22218 22219		
W221-D2 A/O 13.60	30-S 36-R 46-P 22240 22245 22250		
	60-Q 22255		
W221-D2 Zirc 15.64	30-S 22241		
W222-D2 A/O 16.00	24-Q 24-S 36-Q 22260 22265 22275		
	36-U 60-Q 22280 22285		
	30-V 22266		
W222-D2 Zirc 18.40	30-V 22266		
W223-D2 A/O 18.80	46-S 60-R 22295 22300		
W225-D2 A/O 9.60	36-Q 60-T 22310 22315		
W226-D2 A/O 10.80	36-Q 60-T 22310 22315		
W227-D2 A/O 11.20	46-R 60-Q 120-Q 22330 22335 22340		
W228-D2 A/O 12.40	24-Q 22345		
W229-D2 A/O 13.60	36-R 22350		
W230-D2 A/O 14.00	30-Q 30-S 60-P 22355 22360 22365		
W231-D2 A/O 15.20	36-Q 22370		
W232-D2 A/O 17.60	30-Q 30-S 60-P 22355 22360 22365		

Shape & \$ List	Grits & Hardnesses UPC # 691019-()		
W235-D2 A/O 10.00	24-Q 30-S 36-R 22390 22395 22399		
W235-D2 Zirc 10.00	30-V 22397		
W236-D2 A/O 11.60	24-Q 30-S 36-R 22400 22405 22410		
	60-R 22415		
W237-D2 A/O 14.00	36-Q 22420		
W238-D2 A/O 15.60	36-Q 22430		
W239-D2 A/O 18.00	36-R 22435		
W242-D2 A/O 16.00	24-P 36-Q 46-Q 22440 22445 22450		
	80-Q 22455		
W242-D2 Zirc 18.40	30-V 22444		
W243-D2 A/O 18.40	36-Q 22460		

GRADE SPECIFIC FIBER AND RUBBER MOUNTED POINTS

Fiber and rubber bonded wheels are more expensive than are resin and vitrified bonded wheels. Fiber bonded are composed of laminated layers that include a mixture of abrasive, cotton and either a rubber or a resin bond. They are used primarily for polishing applications that require very light deburring or blending. Very resistant to loading, they may be used for stock removal of soft, non-ferrous metals such as aluminum.

Rubber bonded wheels are made from a mixture of abrasive and rubber. They are used for either satin finishing or polishing, dependent largely upon their grit size. Due to their high costs, Modern Abrasive stocks only the most popular of these items. A list follows.



SHAPE	SHANK DIAMETER & LENGTH	DESCRIPTION	UPC# 691019-	LIST PRICE
B52	1/8" x 1-1/2	SOFT FIBER 80	45005	12.22
B52	1/8" x 1-1/2	HARD FIBER 80	45010	12.22
B52	1/8" x 1-1/2	RUBBER 80	45015	8.14
B52	1/8" x 1-1/2	SOFT FIBER 120	45020	12.22
B121	1/8" x 1-1/2	SOFT FIBER 80	45025	10.26
B121	1/8" x 1-1/2	HARD FIBER 80	45030	10.26
B121	1/8" x 1-1/2	RUBBER 120	45031	6.80
B122	1/8" x 1-1/2	SOFT FIBER 80	45034	9.96
W160	1/8" x 1-1/2	SOFT FIBER 80	45035	7.12
W160	1/8" x 1-1/2	SOFT FIBER 120	45040	7.12
W163	1/8" x 1-1/2	SOFT FIBER 80	45045	8.56
W163	1/8" x 1-1/2	HARD FIBER 80	45050	8.56
W163	1/8" x 1-1/2	RUBBER 80	45051	5.76
W163	1/8" x 1-1/2	SOFT FIBER 120	45055	8.56
W163	1/8" x 1-1/2	RUBBER 120	45056	5.76
W175	1/8" x 1-1/2	SOFT FIBER 80	45060	8.06
W176	1/8" x 1-1/2	SOFT FIBER 80	45065	8.56
W177	1/8" x 1-1/2	SOFT FIBER 80	45070	10.34
W185	1/8" x 1-1/2	SOFT FIBER 80	45075	8.56
W185	1/4" x 1-1/2	SOFT FIBER 80	45080	8.56

SHAPE	SHANK DIAMETER & LENGTH	DESCRIPTION	UPC# 691019-	LIST PRICE
W185	1/8" x 1-1/2	HARD FIBER 80	45085	8.56
W185	1/8" x 1-1/2	RUBBER 80	45090	5.76
W185	1/8" x 1-1/2	SOFT FIBER 120	45100	8.56
W187	1/8" x 1-1/2	SOFT FIBER 80	45105	12.04
W187	1/4" x 1-1/2	SOFT FIBER 80	45110	12.04
W187	1/8" x 1-1/2	SOFT FIBER 120	45115	12.04
W189	1/4" x 1-1/2	RUBBER 46	45119	10.72
W189	1/4" x 1-1/2	RUBBER 80	45120	10.72
W205	1/4" x 1-1/2	SOFT FIBER 80	45125	14.56
W208	1/4" x 1-1/2	RUBBER 80	45130	10.92
W220	1/4" x 1-1/2	SOFT FIBER 80	45135	17.62
W220	1/4" x 1-1/2	HARD FIBER 80	45140	17.62
W220	1/4" x 1-1/2	RUBBER 80	45145	8.14
W220	1/4" x 1-1/2	SOFT FIBER 120	45150	17.62
W222	1/4" x 1	SOFT RUBBER 46	45155	12.78
W222	1/4" x 1-1/2	RUBBER 80	45160	12.78
W236	1/4" x 1-1/2	SOFT FIBER 80	45165	14.56
W242	1/4" x 1-1/2	SOFT FIBER 80	45170	28.64

LIST PRICES OF FIBER AND RUBBER BONDED MOUNTED POINTS

SHAPE	FIBER LIST	RUBBER LIST	SHAPE	FIBER LIST	RUBBER LIST	SHAPE	FIBER LIST	RUBBER LIST	SHAPE	FIBER LIST	RUBBER LIST	SHAPE	FIBER LIST	RUBBER LIST
A1	35.76	11.94	B53	12.04	8.14	B121	10.26	6.80	W171	10.34	6.18	W209	30.68	12.78
A2	26.20	9.28	B54	12.04	6.80	B122	9.96	6.48	W172	NA	5.16	W210	NA	5.46
A3	39.78	14.42	B55	NA	6.18	B123	9.22	6.18	W173	8.06	5.16	W211	8.56	5.46
A4	32.76	10.30	B61	10.26	6.80	B124	9.22	6.18	W174	8.06	5.16	W212	8.56	5.46
A5	20.48	8.24	B62	9.22	6.48	B125	NA	6.18	W175	8.06	5.46	W213	10.24	5.76
A6	20.48	8.24	B63	NA	6.18	B131	10.86	5.56	W176	8.56	5.76	W214	NA	5.46
A11	29.68	9.28	B64	NA	6.18	B132	11.40	5.56	W177	10.34	6.18	W215	9.56	5.46
A12	20.48	7.22	B65	9.22	6.18	B133	11.40	5.16	W178	12.04	7.00	W216	9.56	5.46
A13	32.76	8.66	B70	12.22	6.48	B134	12.24	5.16	W179	12.80	8.14	W217	10.24	5.76
A14	17.50	6.48	B71	9.22	6.48	B135	11.40	5.56	W181	NA	5.16	W218	11.68	6.18
A15	15.84	8.24	B72	21.32	6.18	B136	11.40	5.16	W182	8.06	5.16	W219	14.56	6.86
A21	21.36	7.42	B73	NA	6.18		NA	NA	W183	8.06	5.16	W220	17.62	8.14
A22	15.28	6.18	B74	NA	6.18	W141	NA	6.18	W184	8.06	5.46	W221	23.90	10.30
A23	17.34	7.00	B81	NA	6.48	W142	NA	5.16	W185	8.56	5.76	W222	30.68	12.78
A24	12.24	6.82	B82	NA	6.18	W143	7.12	5.16	W186	10.34	6.18	W223	39.78	14.42
A25	24.76	8.24	B83	NA	6.18	W144	7.12	5.16	W187	12.04	7.00	W225	10.24	7.42
A26	17.50	7.00	B84	NA	6.18	W145	8.06	5.46	W188	14.56	8.86	W226	12.62	8.14
A31	27.46	9.28	B90	12.24	6.80	W146	8.56	5.76	W189	18.98	10.72	W227	14.56	8.14
A32	18.30	7.22	B91	12.24	8.14	W149	7.12	5.16	W190	NA	5.46	W228	18.98	9.06
A33	13.86	6.60	B92	9.22	6.18	W151	NA	5.16	W191	8.06	5.46	W229	26.78	10.30
A34	14.58	8.24	B93	9.22	6.18	W152	7.12	5.16	W192	8.06	5.46	W230	26.78	10.92
A35	11.68	6.60	B94	NA	6.18	W153	8.06	5.46	W193	8.80	5.56	W231	26.78	12.98
A36	19.94	8.44	B95	NA	6.18	W154	8.56	5.76	W194	10.34	6.48	W232	35.76	16.48
A37	11.68	7.42	B96	9.22	6.18	W157	NA	5.16	W195	12.80	7.62	W235	12.62	6.48
A38	21.32	7.82	B97	12.22	6.48	W158	7.12	5.16	W196	14.56	8.44	W236	14.56	8.66
A39	15.16	7.22	B98	NA	6.18	W159	NA	5.16	W197	23.90	10.92	W237	22.62	12.36
A40	28.12	9.68	B101	15.28	8.24	W160	7.12	5.16	W198	30.68	12.78	W238	26.78	14.42
			B102	15.28	7.22	W161	8.06	5.46	W199	NA	5.46	W239	30.68	18.54
B41	15.28	6.60	B103	12.24	6.48	W162	8.06	5.46	W200	8.56	5.46	W240	NA	20.18
B42	12.24	8.14	B104	12.24	6.48	W163	8.56	5.76	W201	9.40	5.46	W241	NA	20.60
B43	9.22	6.80	B105	NA	6.18	W164	8.80	6.18	W202	8.80	5.46	W242	28.64	17.10
B44	9.22	6.80	B106	NA	6.18	W165	NA	5.16	W203	10.34	6.48	W243	NA	18.34
B45	9.22	6.80	B111	12.24	8.14	W166	8.06	5.16	W204	12.80	7.62	W244	NA	20.18
B46	NA	6.80	B112	9.84	6.80	W167	8.06	5.16	W205	14.56	8.44	W245	NA	22.66
B47	NA	6.18	B113	9.96	6.18	W168	8.06	5.46	W206	17.20	8.66	W246	NA	24.72
B51	12.24	8.14	B114	NA	6.48	W169	8.06	5.46	W207	19.48	8.86			
B52	12.22	8.14	B115	NA	6.18	W170	8.56	5.76	W208	23.90	10.92			

SPECIALTY MOUNTED POINTS



MOUNTED POINTS FOR THE EX-CELL-O CENTER LAPPING MACHINE (60 DEG INCLUDED ANGLES) 1/2" X 1-1/4 SHANKS

UPC # 691019-	SHAPE	SIZE	GRADE	LIST PRICE
30005	CL189	1/2 X 2	BLUE-GRAY 100-Q	22.00
30010	CL189	1/2 X 2	DARK BROWN 100-U	22.00
30015	CL189	1/2 X 2	BLUE-GRAY 150-Q	22.00
30020	CL189	1/2 X 2	BROWN 150-U	22.00
30025	CL189	1/2 X 2	BROWN 220-U	22.00
30030	CL197	5/8 X 2	BLUE-GRAY 60-Q	22.70
30035	CL197	5/8 X 2	DARK BROWN 80-U	22.70
30040	CL197	5/8 X 2	BROWN 150-U	22.70
30045	CL208	3/4 X 2	BLUE-GRAY 60-Q	22.70
30050	CL208	3/4 X 2	DARK BROWN 80-U	22.70
30055	CL208	3/4 X 2	BROWN 150-U	22.70
30060	CL222	1 X 2	BLUE-GRAY 60-Q	23.50
30065	CL222	1 X 2	DARK BROWN 80-U	23.50
30070	CL222	1 X 2	BROWN 150-U	23.50
30075	CL232	1-1/4 X 2	BLUE-GRAY 60-Q	27.20
30080	CL232	1-1/4 X 2	DARK BROWN 80-U	27.20
30085	CL232	1-1/4 X 2	BROWN 150-U	27.20
30090	CL239	1-1/2 X 2	DARK BROWN 60-U	28.00
30095	CL239	1-1/2 X 2	BLUE-GRAY 80-Q	28.00
30100	CL239	1-1/2 X 2	DARK BROWN 80-U	28.00
30105	CL239	1-1/2 X 2	BROWN 150-U	28.00
30110	CL244	2 X 2	DARK BROWN 80-U	34.00
30115	CL244	2 X 2	BROWN 150-U	34.00



MOUNTED POINTS FOR PROFILE GRINDING MOUNTED ON 1/2" X 1-1/2 SHANKS

UPC # 691019-	SHAPE	SIZE	GRADE	LIST PRICE
40005	W209	3/4 X 2-1/2	BURNT-ORANGE 60-K	16.60
40010	W209	3/4 X 2-1/2	BLUE-GRAY 60-M	16.60
40015	W224	1 X 3	BLUE-GRAY 36-K	19.20
40020	W224	1 X 3	BLACK S/C 36-L	21.90
40025	W224	1 X 3	PINK 46-K	19.20
40030	W224	1 X 3	GRAYISH-WHITE 46-M	21.00
40035	W224	1 X 3	BLUE-GRAY 60-J	19.20
40050	W224	1 X 3	PINK 80-K	19.20
40055	W241	1-1/2 X 3	WHITE 46-J	23.00
40060	W241	1-1/2 X 3	BLUE-GRAY 60-L	23.00
40065	W241	1-1/2 X 3	BLUE-GRAY 80-M	23.00
40070	W246	2 X 3	BLUE-GRAY 36-K	28.30
40075	W246	2 X 3	SALT + PEPPER 46-J	28.30
40080	W246	2 X 3	GRAYISH-WHITE 46-L	31.00
40085	W246	2 X 3	PINK 46-L	28.30
40090	W246	2 X 3	SALT + PEPPER 46-M	28.30
40095	W246	2 X 3	BLUE-GRAY 60-K	28.30
40100	W246	2 X 3	PINK 80-J	28.30
40105	W246	2 X 3	BLUE-GRAY 120-K	28.30



MOUNTED POINTS FOR CENTER HOLE GRINDING MOUNTED ON 3/8-16 THREADED SHANKS

UPC # 691019-	SHAPE AND SIZE	GRADE	LIST PRICE
35005	.56 X 1.19(60 DEG)	BURNT-ORANGE 60-N	22.70
35010	.56 X 1.19(60 DEG)	WHITE 60-N	22.70
35025	.56 X 1.19(60 DEG)	WHITE 120-N	22.70
35030	.56 X 1.19(60 DEG)	BLUE-GRAY 120-O	22.70
35060	1.12 X 1.19(60 DEG)	WHITE 60-N	26.00
35065	1.12 X 1.19(60 DEG)	WHITE 100-M	26.00
35075	1.12 X 1.19(60 DEG)	WHITE 120-N	26.00
35080	1.12 X 1.19(60 DEG)	BLUE-GRAY 120-O	26.00

MOUNTED POINTS FOR JIG GRINDING

SHAPE	SIZE	GRADE	APPLICATION
W176	3/8 X 1/2	GRAYISH-WHITE 60-J	C
W176	3/8 X 1/2	GRAYISH-WHITE 60-L	A
W176	3/8 X 1/2	BLUE-GRAY 60-M	B
W176	3/8 X 1/2	GREEN 60-M	D
W176	3/8 X 1/2	BLACK 60-N	D
W176	3/8 X 1/2	WHITE 60-N	B
W176	3/8 X 1/2	BLUE-GRAY 80-L	A
W176	3/8 X 1/2	GRAYISH-WHITE 80-M	B
W185	1/2 X 1/2	GRAYISH-WHITE 60-J	C
W185	1/2 X 1/2	BLUE-GRAY 60-K	A
W185	1/2 X 1/2	WHITE 60-K	A
W185	1/2 X 1/2	GREEN 60-M	D
W185	1/2 X 1/2	GRAYISH-WHITE 60-N	B
W185	1/2 X 1/2	BLACK 60-N	D
W185	1/2 X 1/2	GRAYISH-WHITE 80-K	A
W185	1/2 X 1/2	WHITE 80-K	A
W185	1/2 X 1/2	BLUE-GRAY 80-L	A
W203	3/4 X 1/2	BLUE-GRAY 54-I	C
W203	3/4 X 1/2	GRAYISH-WHITE 60-K	A
W203	3/4 X 1/2	BLUE-GRAY 60-K	A
W203	3/4 X 1/2	GRAYISH-WHITE 60-N	B
W203	3/4 X 1/2	WHITE 60-N	B
W203	3/4 X 1/2	GRAYISH-WHITE 80-L	A
W203	3/4 X 1/2	BLACK 80-M	D
W203	3/4 X 1/2	GREEN 80-M	D
W218	1 X 1/2	BLUE-GRAY 54-I	C
W218	1 X 1/2	GRAYISH-WHITE 60-K	A
W218	1 X 1/2	BLUE-GRAY 60-K	A
W218	1 X 1/2	WHITE 60-K	A
W218	1 X 1/2	GRAYISH-WHITE 60-N	B
W218	1 X 1/2	WHITE 60-N	B
W218	1 X 1/2	WHITE 80-J	C
W218	1 X 1/2	WHITE 80-K	A
W218	1 X 1/2	GRAYISH-WHITE 80-L	A
W218	1 X 1/2	GREEN 80-M	D
W218	1 X 1/2	BLACK 80-N	D
W236	1-1/2 X 1/2	BLUE-GRAY 54-I	C
W236	1-1/2 X 1/2	GRAYISH-WHITE 60-K	A
W236	1-1/2 X 1/2	BLUE-GRAY 60-K	A
W236	1-1/2 X 1/2	WHITE 60-L	A
W236	1-1/2 X 1/2	GREEN 60-M	D
W236	1-1/2 X 1/2	BLACK 60-N	D
W236	1-1/2 X 1/2	WHITE 60-N	B
W236	1-1/2 X 1/2	WHITE 80-J	C
W236	1-1/2 X 1/2	GRAYISH-WHITE 80-K	A
W236	1-1/2 X 1/2	BLUE-GRAY 80-K	A

APPLICATION: A = GENERAL PURPOSE — WIDE RANGE
C = OIL HARDENED STEELS

B = ROUGH GRINDING — SOFTER STEELS
D = WEAR RESISTANT STEELS

*UPC #s ARE FOR WHEELS MOUNTED ON 1/4" DIAMETER BY 1-1/2" LONG SHANKS. THEY ARE AVAILABLE ON THE FOLLOWING SHANKS AS WELL AT AN ADDITIONAL COST.

1/4 X 3

3/8 X 4 (OR SHORTER)

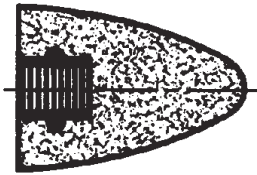
1/4-20 THREADED

10-32 THREADED**

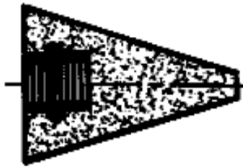
**W218 AND W236 SHAPES ARE NOT AVAILABLE ON 10-32 THREADED SHANKS.

STOCK RESIN BOND CONE AND PLUG WHEELS

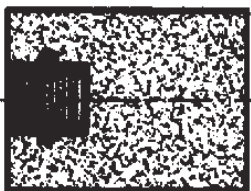
SPECIAL LOW VOLUME PRICES (10 PCS. MIN. PER ITEM)



TYPE 16



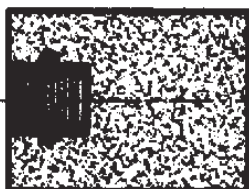
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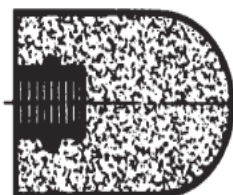
TYPE 18

UPC #691019-()	Type	Size	Tip	Insert	MAT	Grade	List Price
50001	T16	1 X 3	NA	3/8-24	AO	A24-RBX	8.16
50002	T16	1-1/4 X 3	NA	5/8-11	AO	A203-S4B4XL	8.90
50003	T16	1-1/2 X 2-1/2	NA	3/8-24	AO	A162-R4B2X	8.16
50004	T16	1-1/2 X 2-1/2	NA	5/8-11	AO	A162-R4B2X	8.16
50010	T16	1-1/2 X 2-1/2	NA	3/8-24	AO	A162-R5B2X	8.16
50005	T16	1-1/2 X 2-1/2	NA	5/8-11	AO	A24-R4B2X	8.16
50017	T16	1-1/2 X 3	NA	3/8-24	AC	AC16-P4B2X	8.90
50015	T16	1-1/2 X 3	NA	3/8-24	AO	A162-R4B2X	8.90
50020	T16	1-1/2 X 3	NA	5/8-11	AO	A163-R4B2X	8.90
50018	T16	1-1/2 X 3	NA	3/8-24	AC	AC24-R4B2X	8.90
50025	T16	1-1/2 X 3	NA	3/8-24	AO	A24-R4B2X	8.90
50030	T16	1-1/2 X 3	NA	5/8-11	AO	A24-R4B2X	8.90
50027	T16	1-1/2 X 3	NA	5/8-11	Z	AZ143-T5B2X	10.24
50026	T16	1-1/2 X 3	NA	5/8-11	Z	26A162-R4B2X	10.24
50035	T16	1-3/4 X 3	NA	5/8-11	AO	A163-R5B2X	9.80
50040	T16	1-3/4 X 3	NA	5/8-11	AO	A24-R4B2X	9.80
50045	T16	2 X 3	NA	5/8-11	AO	A162-R4B2X	9.80
50046	T16	2 X 3	NA	5/8-11	AO	A203-S4B4X	9.80
50050	T16	2 X 3	NA	5/8-11	AO	A24-R4B2X	9.80
50047	T16	2 X 3	NA	5/8-11	Z	ZA162-R5B2X	11.28
50048	T16	2 X 3	NA	5/8-11	Z	26A242-R5B4X	11.28
50051	T16	2 X 4	NA	5/8-11	AO	A163-P5B2X	12.16
50055	T16	2-3/4 X 3-1/2	NA	5/8-11	AO	A163-P5B2X	14.76
50056	T16	2-3/4 X 3-1/2	NA	5/8-11	AC	AC162-Q4B2X	14.76
50060	T16	2-3/4 X 3-1/2	NA	5/8-11	AO	A241-R4B2X	14.76
50057	T16	2-3/4 X 3-1/2	NA	5/8-11	Z	AZ24-R4B2X	14.76
50061	T16	3 X 3	NA	5/8-11	AO	A16-R4B2X	12.96
50062	T16	3 X 4	NA	5/8-11	AO	A16-R5B2X	16.06
50063	T16	3 X 4	NA	5/8-11	AO	A203-S5B4XL	16.06
50064	T16	3 X 4	NA	5/8-11	AO	A36-R5B2X	16.06
50300	T17	1-1/2 X 2-1/2	3/8	3/8-24	AO	A16-R4B2X	8.68
50305	T17	1-1/2 X 2-1/2	3/8	5/8-11	AO	A16-R4B2X	8.68
50375	T17	1-1/2 X 2-1/2	5/8	5/8-11	AO	A16-R4B2X	8.68
50320	T17	1-1/2 X 3	1/2	3/8-24	AO	AC16-P4B2X	9.70
50310	T17	1-1/2 X 3	1/2	3/8-24	AC	A163-R4B2X	9.70
50330	T17	1-1/2 X 3	1/2	5/8-11	AO	A203-R4B2X	9.70
50315	T17	1-1/2 X 3	1/2	3/8-24	AO	A203-S5B4X	9.70
50325	T17	1-1/2 X 3	1/2	3/8-24	Z	AZ143-T5B2X	11.16
50335	T17	1-1/2 X 3	1/2	5/8-11	Z	26A162-R4B2X	9.70
50340	T17	2 X 3	1/2	5/8-11	AO	A162-R4B2X	10.68
50365	T17	2 X 3	1	5/8-11	Z	AZ14-T5B2X	15.20
50360	T17	2 X 3	3/4	5/8-11	Z	AZ24-R4B2X	15.20
50345	T17	2 X 4	3/4	5/8-11	AO	A16-R4B2X	13.22
50350	T17	2 X 4	3/4	5/8-11	AO	A24-R4B4X	13.22
50355	T17	2 X 4	3/4	5/8-11	Z	AZ16-R5B2X	15.20
50370	T17	2-1/2 X 3	3/4	5/8-11	AO	A163-R4B2X	12.86
50066	T18	1 X 2	NA	3/8-24	AO	A163-Q4B2X	5.60
50065	T18	1 X 2	NA	3/8-24	AO	A243-R4B2X	5.60
50067	T18	1 X 2	NA	3/8-24	Z	26A162-R4B2X	6.44
50068	T18	1 X 3	NA	3/8-24	AO	A164-S4B4X	7.10
50069	T18	1 X 3	NA	3/8-24	Z	AZ143-T5B2X	8.16
50071	T18	1-1/4 X 3	NA	3/8-24	AO	A16-S4B4X	7.76
50072	T18	1-1/4 X 3	NA	3/8-24	AC	AC162-T4B2X	7.76
50073	T18	1-1/4 X 3	NA	3/8-24	Z	AZ162-R5B2X	8.90
50070	T18	1-1/2 X 2-1/2	NA	3/8-24	AO	A163-R4B2X	6.94
50075	T18	1-1/2 X 2-1/2	NA	5/8-11	AO	A16-R4B2X	6.94
50080	T18	1-1/2 X 2-1/2	NA	3/8-24	AO	A203-R4B2X	6.94
50076	T18	1-1/2 X 2-1/2	NA	3/8-24	AO	A24-R4B2X	6.94
50085	T18	1-1/2 X 2-1/2	NA	5/8-11	AO	A24-R4B2X	6.94
50086	T18	1-1/2 X 2-1/2	NA	5/8-11	Z	AZ16-R4B2X	7.98
50077	T18	1-1/2 X 2-1/2	NA	3/8-24	Z	ZA201-U5B4X	7.98

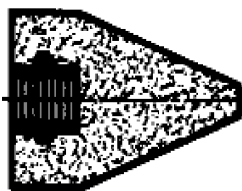
STOCK RESIN BOND CONE AND PLUG WHEELS SPECIAL LOW VOLUME PRICES (10 PCS. MIN. PER ITEM)



TYPE 18



TYPE 18R



TYPE 19

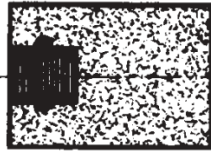
UPC #691019-()	Type	Size	Tip	Insert	MAT	Grade	List Price
50087	T18	1-1/2 X 2-1/2	NA	5/8-11	Z	AZ24-R4B2X	7.98
50096	T18	1-1/2 X 3	NA	3/8-24	AC	AC162-R4B2X	7.76
50090	T18	1-1/2 X 3	NA	3/8-24	AO	A163-R4B2X	7.76
50095	T18	1-1/2 X 3	NA	5/8-11	AO	A16-R4B2X	7.76
50106	T18	1-1/2 X 3	NA	5/8-11	AO	A203-S4B4XL	7.76
50100	T18	1-1/2 X 3	NA	3/8-24	AO	A24-R4B2X	7.76
50105	T18	1-1/2 X 3	NA	5/8-11	AO	A24-R4B2X	7.76
50098	T18	1-1/2 X 3	NA	3/8-24	Z	AZ143-T5B2X	8.92
50104	T18	1-1/2 X 3	NA	5/8-11	Z	AZ143-T5B2X	8.92
50097	T18	1-1/2 X 3	NA	3/8-24	Z	26A162-R4B2X	8.92
50103	T18	1-1/2 X 3	NA	5/8-11	Z	AZ20-R5B4X	8.92
50108	T18	1-1/2 X 3	NA	5/8-11	Z	A203-S4B4XL	8.92
50107	T18	1-1/2 X 3	NA	5/8-11	Z	A203-S4B4XL	8.92
50110	T18	2 X 2	NA	3/8-24	AO	A20-Q4B2X	6.12
50115	T18	2 X 2	NA	5/8-11	AO	A20-R4B2X	6.12
50120	T18	2 X 3	NA	5/8-11	AO	A162-R4B2X	8.54
50121	T18	2 X 3	NA	5/8-11	AO	A203-S4B4XL	8.54
50125	T18	2 X 3	NA	5/8-11	AO	A24-R4B2X	8.54
50126	T18	2 X 3	NA	5/8-11	Z	ZA162-R5B2X	9.82
50128	T18	2 X 4	NA	5/8-11	AO	A16-R4B2X	10.58
50129	T18	2 X 3-1/2	NA	5/8-11	AO	A202-Q5B2X	9.56
50130	T18	2 X 3-1/2	NA	5/8-11	AO	A20-R4B2X	10.58
50131	T18	2 X 3-1/2	NA	5/8-11	AO	A24-R4B4X	10.58
50132	T18	2 X 3-1/2	NA	5/8-11	Z	ZA162-R4B2X	12.16
50133	T18	2-1/4 X 3	NA	5/8-11	AO	A162-R4B2X	10.28
50134	T18	2-1/4 X 3	NA	5/8-11	AO	A241-R5B2X	10.28
50135	T18	3 X 3	NA	5/8-11	AO	A163-R4B2X	11.74
50136	T18	3 X 3	NA	5/8-11	MXD	TA243-P5B2X	12.96
50140	T18	4 X 3	NA	5/8-11	AO	A20-R4B2X	14.52
50145	T18R	1-1/2 X 2-1/2	NA	3/8-24	AO	A163-R4B2X	8.16
50150	T18R	1-1/2 X 2-1/2	NA	5/8-11	AO	A163-R4B2X	8.16
50146	T18R	1-1/2 X 2-1/2	NA	3/8-24	AO	A24-R4B2X	8.16
50155	T18R	1-1/2 X 2-1/2	NA	5/8-11	AO	A24-R4B2X	8.16
50147	T18R	1-1/2 X 2-1/2	NA	3/8-24	Z	AZ20-U5B4X	9.38
50160	T18R	1-1/2 X 3	NA	3/8-24	AO	A162-R4B2X	8.90
50165	T18R	1-1/2 X 3	NA	5/8-11	AO	A162-R4B2X	8.90
50170	T18R	1-1/2 X 3	NA	3/8-24	AO	A24-R4B2X	8.90
50175	T18R	1-1/2 X 3	NA	5/8-11	AO	A24-R4B2X	8.90
50166	T18R	1-1/2 X 3	NA	5/8-11	Z	ZA16-R5B2X	10.24
50176	T18R	1-1/2 X 3-1/2	NA	5/8-11	Z	AZ14-T5B2X	11.98
50180	T18R	2 X 3	NA	5/8-11	AO	A163-R4B2X	9.80
50184	T18R	2 X 3	NA	5/8-11	AO	A203-S4B4XL	9.80
50185	T18R	2 X 3	NA	5/8-11	AO	A24-R4B2X	9.80
50183	T18R	2 X 3	NA	5/8-11	Z	ZA16-R5B2X	11.28
50187	T18R	2 X 4	NA	5/8-11	AO	A163-R5B2X	10.58
50186	T18R	2 X 4	NA	5/8-11	AO	A203-S4B4XL	10.58
50188	T18R	2 X 4	NA	5/8-11	Z	26A162-R4B2X	12.16
50189	T18R	2 X 4	NA	5/8-11	Z	AZ24-R4B2X	12.16
50190	T18R	2-3/4 X 3-1/2	NA	5/8-11	AO	A163-R4B2X	14.76
50195	T18R	2-3/4 X 3-1/2	NA	5/8-11	AO	A243-R4B2X	14.76
50200	T18R	3 X 3	NA	5/8-11	AO	A163-R4B2X	12.96
50205	T18R	3 X 3	NA	5/8-11	AO	A24-R4B2X	12.96
50211	T18R	3 X 4	NA	5/8-11	AC	AC163-S5B4X	16.06
50210	T18R	3 X 4	NA	5/8-11	AO	A20-R4B2X	16.06
50212	T18R	3 X 4	NA	5/8-11	Z	ZA162-R5B2X	18.46
50215	T19	2 X 4	7/8	5/8-11	AO	A16-R4B2X	12.16
50216	T19	2 X 4	7/8	5/8-11	AO	A24-R4B4X	12.16

TYPE 18 PLUG WHEELS

LIST PRICES

RESIN BOND

ALUMINUM OXIDE GRADES



TYPE 18

Diameter & Thickness	B	C	D	E	F	G
	40	150	450	750	1500	3000
1" X 1-1/4	7.76	6.38	5.68	4.92	3.78	3.02
1-1/2	8.28	6.80	6.06	5.28	4.06	3.24
2	9.56	7.86	7.00	6.08	4.66	3.72
	20	75	200	400	750	1500
2-1/4	10.58	8.72	7.76	6.76	5.08	4.14
2-1/2	10.98	9.02	8.02	7.00	5.38	4.30
3	11.90	9.78	8.70	7.56	5.90	4.72
	40	250	700	1100	2500	4000
1-1/2" X 1-1/4	8.28	6.78	6.04	5.26	4.02	3.32
1-1/2	8.78	7.22	6.42	5.60	4.30	3.44
2	9.96	8.18	7.28	6.32	4.86	3.88
	20	75	200	400	750	1500
2-1/4	11.22	9.26	8.24	7.18	5.48	4.38
2-1/2	11.88	9.76	8.68	7.56	5.78	4.62
3	13.18	10.86	9.66	8.40	6.46	5.16
3-1/4	14.32	11.78	10.48	9.12	7.00	5.60
3-1/2	14.98	12.30	10.94	9.52	7.30	5.84
4	16.50	13.58	12.08	10.50	8.06	6.44
	40	150	450	750	1500	3000
2" X 1-1/4	8.28	6.80	6.06	5.26	4.02	3.32
1-1/2	8.90	7.32	6.52	5.68	4.36	3.48
2	10.46	8.58	7.64	6.68	5.10	4.08
	20	75	200	400	750	1500
2-1/4	10.98	9.02	8.02	6.98	5.36	4.28
2-1/2	12.78	10.50	9.34	8.16	6.26	5.00
3	14.58	12.00	10.68	9.30	7.12	5.70
3-1/4	15.88	13.06	11.62	10.10	7.76	6.20
3-1/2	16.68	13.70	12.20	10.60	8.16	6.52
4	18.06	14.86	13.22	11.50	8.82	7.06
2-1/2" X 2	12.12	9.98	8.88	7.72	5.92	4.74
2-1/4	13.80	11.38	10.12	8.80	6.76	5.40
2-1/2	14.98	12.30	10.94	9.52	7.30	5.84
3	17.28	14.20	12.64	11.00	8.46	6.76
3-1/4	18.72	15.38	13.68	11.92	9.12	7.30
3-1/2	19.60	16.12	14.34	12.50	9.58	7.66
4	21.68	17.82	15.86	13.80	10.58	8.46
3" X 2	13.80	11.38	10.12	8.80	6.76	5.40
2-1/4	15.76	12.98	11.56	10.16	7.70	6.16
2-1/2	17.18	14.12	12.56	10.92	8.38	6.70
3	20.00	16.46	14.64	12.72	9.78	7.82
3-1/4	21.56	17.72	15.78	13.72	10.52	8.42
3-1/2	22.58	18.58	16.54	14.38	11.02	8.82
4	24.78	20.38	18.14	15.78	12.10	9.68

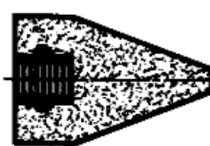
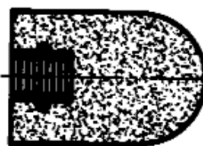
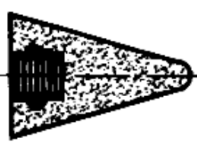
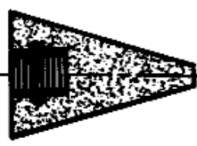
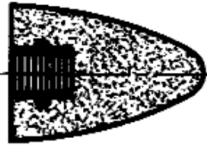
PRICES SHOWN APPLY TO ALUMINUM OXIDE AND COMBINATION GRAIN (AC)
 FOR SILICON CARBIDE ADD 15% TO PRICES SHOWN
 FOR ZIRCONIUM ADD 15% TO PRICES SHOWN
 LESS THAN B QUANTITY AVAILABLE ON REQUEST
 FOR INTERMEDIATE DIAMETERS USE NEXT LARGER DIAMETER
 THREADED INSERT (3/8-16, 3/8-24, 1/2-13, OR 5/8-11) MUST BE SPECIFIED
 SIZES NOT SHOWN AVAILABLE ON REQUEST

TYPE 16-17-17R-18R-19-19R CONE WHEELS

LIST PRICES

RESIN BOND

ALUMINUM OXIDE GRADES



TYPE 16

TYPE 17

TYPE 17R

TYPE 18R

TYPE 19

TYPE 19R

Diameter & Thickness	B	C	D	E	F	G
	40	150	450	750	1500	3000
1" X 1-1/4	9.16	7.52	6.70	5.82	4.48	3.58
1-1/2	9.68	7.98	7.10	6.18	4.72	3.78
2	10.98	9.02	8.02	6.98	5.36	4.28
	20	75	200	400	750	1500
2-1/4	12.66	10.40	9.26	8.06	6.16	4.92
2-1/2	12.92	10.62	9.46	8.22	6.40	5.06
3	13.94	11.46	10.20	8.88	6.80	5.44
1-1/2" X 2	11.34	9.36	8.34	7.22	5.56	4.44
2-1/4	13.28	10.92	9.72	8.46	6.50	5.20
2-1/2	13.94	11.46	10.20	8.88	6.80	5.44
3	15.22	12.52	11.14	9.68	7.42	5.94
3-1/4	16.90	13.92	12.38	10.78	8.28	6.62
3-1/2	17.56	14.46	12.86	11.18	8.58	6.86
4	19.12	15.70	13.98	12.16	9.32	7.46
2" X 2-1/2	14.84	12.20	10.86	9.46	7.26	5.80
3	16.66	13.68	12.18	10.60	8.16	6.52
3-1/4	18.46	15.18	13.52	11.72	9.02	7.22
3-1/2	19.24	15.82	14.08	12.26	9.38	7.50
4	20.64	16.98	15.12	13.16	10.10	8.08
2-1/2" X 3	19.34	15.90	14.16	12.36	9.48	7.58
3-1/4	21.28	17.50	15.58	13.58	10.40	8.32
3-1/2	22.18	18.26	16.26	14.12	10.86	8.68
4	24.22	19.92	17.72	15.42	10.82	9.46
3" X 3	22.08	18.18	16.18	14.08	10.80	8.64
3-1/4	24.12	19.86	17.68	15.36	11.78	9.42
3-1/2	25.18	20.68	18.40	16.06	12.30	9.84
4	27.36	22.50	20.02	17.42	13.38	10.70

PRICES SHOWN APPLY TO ALUMINUM OXIDE AND COMBINATION GRAIN (AC)
 FOR SILICON CARBIDE ADD 15% TO PRICES SHOWN
 FOR ZIRCONIUM ADD 15% TO PRICES SHOWN
 LESS THAN B QUANTITY AVAILABLE ON REQUEST
 FOR INTERMEDIATE DIAMETERS USE NEXT LARGER DIAMETER
 THREADED INSERT (3/8-16, 3/8-24, 1/2-13, OR 5/8-11) MUST BE SPECIFIED
 SPECIFY TIP SIZE OF T17, T17R, T19, AND T19R
 SIZES NOT SHOWN AVAILABLE ON REQUEST

SHARPENING STONES

BENCH STONES



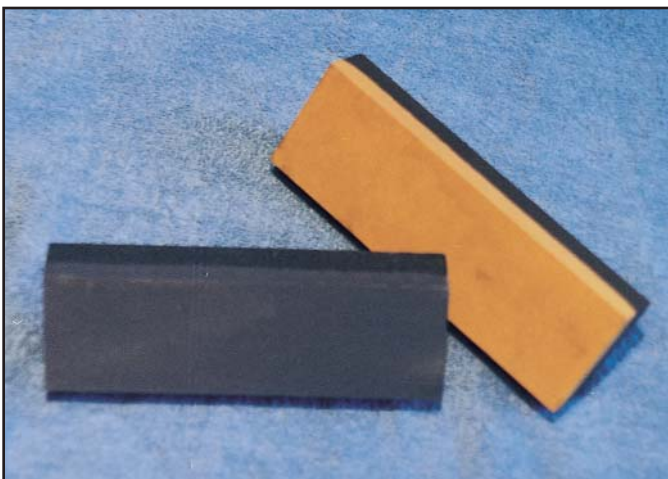
Stocked in coarse, medium and fine grit sizes, silicon carbide bench stones may be used to quickly resharpen a cutting edge, but the resulting edge will not be long lasting. (Dark grey in color)

Oil-filled aluminum oxide bench stones are inventoried in coarse, medium and fine grit sizes. Although a user will not be able to quickly resharpen a cutting edge with an aluminum oxide stone, the cutting edge finally achieved will be long lasting. (Orange/Brown in color)

Very soft natural Arkansas bench stones are the best general purpose sharpening stones. They offer a user the ability to simultaneously sharpen and polish a cutting edge. (Speckled brown in color)

Ultra-hard Arkansas bench stones are extremely dense and will enable a user to polish an already sharpened edge to a finish beyond what other stones would yield. They should not be used for general purpose sharpening. (Translucent grey in color)

Semi-hard Arkansas bench stones are flawed ultra-hard stones. The flaw in the stone will be either discoloration or slight density variation. They should be used only to polish pre-sharpened edges. (Colors vary)



SINGLE GRIT

Product Description	List Price \$	Size (inches)	Grit/ Density	Product Number	UPC # 691019-
Silicon Carbide Bench Stones	7.56	4 x 1 x 1/4	Coarse Medium Fine	147 146 145	91010 92010 93010
	10.86	4 x 1 x 1/2	Coarse Medium Fine	292C 292M 292F	91011 92011 93011
	20.04	5 x 2 x 5/8	Medium Fine	MJB35M FJB35M	91009 92009
	25.02	6 x 2 x 1	Coarse Medium Fine	123 122 121	91008 92008 93008
	30.94	8 x 2 x 1	Coarse Medium Fine	117 116 115	91006 92006 93006
Oil-Filled Aluminum Oxide Bench Stones	7.56	4 x 1 x 1/4	Coarse Medium Fine	147A 146A 145A	94010 95010 96010
	10.86	4 x 1 x 1/2	Coarse Medium Fine	292AC 292AM 292AF	94011 95011 96011
	20.04	5 x 2 x 5/8	Medium Fine	MB35M FB35M	93009 94009
	25.02	6 x 2 x 1	Coarse Medium Fine	123A 122A 121A	94008 95008 96008
	25.94	8 x 2 x 1	Coarse Medium Fine	132 131 130	94006 95006 96006
Very Soft Arkansas Bench Stones	48.58	4 x 2 x 3/4	Very Soft	SB4B	71137
	66.16	6 x 2 x 3/4	Very Soft	SB6B	71138
	87.88	8 x 2 x 3/4	Very Soft	SB8B	71139
Semi-Hard Arkansas Bench Stones	89.44	4 x 2 x 3/4	Semi-Hard	SHB4M	71140
	132.16	6 x 2 x 3/4	Semi-Hard	SHB6M	71141
	169.86	8 x 2 x 3/4	Semi-Hard	SHB8M	71142
Ultra-Hard Arkansas Bench Stones	139.72	4 x 2 x 3/4	Ultra-Hard	HB4T	71143
	206.50	6 x 2 x 3/4	Ultra-Hard	HB6T	71144
	265.42	8 x 2 x 3/4	Ultra-Hard	HB8T	71145

When more than one grit size is necessary to resharpen a cutting edge a craftsman will often use a **combination stone** to lessen both the expense and the inconvenience of using two single grit stones. Use a silicon carbide stone for sharpening quickly or an oil-filled aluminum oxide stone for restoring a long lasting edge.

Product Description	List Price \$	Size (inches)	Grit/ Density	Product Number	UPC # 691019-
Silicon Carbide Combination Bench Stones	26.64	4 x 1 Round	Coarse and Fine	107C	91001
	16.60	4 x 1 3/4 x 5/8		112C	91004
	22.38	5 x 2 x 3/4		111C	91003
	26.64	6 x 2 x 1		109C	92001
	31.56	8 x 2 x 1		108C	91002
Oil-Filled Aluminum Oxide Bench Stones	26.64	4 x 1 Round	Coarse and Fine	107A	93001
	16.60	4 x 1 3/4 x 5/8		112A	92004
	22.38	5 x 2 x 3/4		111A	92003
	26.64	6 x 2 x 1		433	94001
	31.56	8 x 2 x 1		431	92002

SHARPENING STONES (CONTINUED)

TOOL ROOM FILES



Product Description	List Price \$	Size (inches)	Grit/Density	Product Number	UPC # 691019-
Silicon Carbide Half-Round Files	9.00	4 x 1/4	Coarse Medium Fine	C17 M17 F17	91429 91529 91629
	9.00	4 x 5/16	Coarse Medium Fine	C19 M19 F19	91729 91829 91929
	9.88	4 x 3/8	Coarse Medium Fine	C21 M21 F21	91431 91531 91631
	9.88	4 x 1/2	Coarse Medium Fine	C23 M23 F23	91731 91831 91931
	12.94	6 x 3/8	Coarse Medium Fine	C53 M53 F53	92132 92232 92332
	12.94	6 x 1/2	Coarse Medium Fine	C55 M55 F55	92432 92532 92632
	13.50	6 x 5/8	Coarse Medium Fine	C57 M57 F57	97034 98034 99034
	13.74	6 x 3/4	Coarse Medium Fine	C59 M59 F59	97014 98014 99014
	14.98	6 x 1	Coarse Medium Fine	C61 M61 F61	97033 98033 99033
	Oil-Filled Aluminum Oxide Half-Round Files	9.00	4 x 1/4	Coarse Medium Fine	C18 M18 F18
9.00		4 x 5/16	Coarse Medium Fine	C20 M20 F20	92429 92529 92629
9.88		4 x 3/8	Coarse Medium Fine	C22 M22 F22	92131 92231 92331
9.88		4 x 1/2	Coarse Medium Fine	C24 M24 F24	92431 92531 92631
12.94		6 x 3/8	Coarse Medium Fine	C54 M54 F54	92732 92832 92932
12.94		6 x 1/2	Coarse Medium Fine	C56 M56 F56	93132 93232 93332
13.50		6 x 5/8	Coarse Medium Fine	C58 M58 F58	91134 91234 91334
13.74		6 x 3/4	Coarse Medium Fine	C60 M60 F60	91114 91214 91314
14.98		6 x 1	Coarse Medium Fine	C62 M62 F62	91133 91233 91333



Squares and triangles have both flat sides and long, sharp edges. They are the most popular types of tool room files. Choose both the material and the grit size to arrive at the desired finish in the time allowed. Choose the shape and size that will give you the snugest fit to the surface being honed.



Both **rounds and half-rounds** offer curved faces to give the user the ability to hone instruments with contoured surfaces. Half-rounds have the extra dimension of a flat side. The denser the material a round or a half-round is made from the better the finish it can offer the user, but the longer it will take him to achieve it.




Product Description	List Price \$	Size (inches)	Grit/Density	Product Number	UPC # 691019-
Silicon Carbide Square Files	6.76	4 x 1/4	Coarse Medium Fine	C1 M1 F1	91028 92028 93028
	6.76	4 x 5/16	Coarse Medium Fine	C3 M3 F3	94028 95028 96028
	6.76	4 x 3/8	Coarse Medium Fine	C5 M5 F5	97028 98028 99028
	6.76	4 x 1/2	Coarse Medium Fine	C7 M7 F7	91128 91228 91328
	11.28	6 x 3/8	Coarse Medium Fine	C33 M33 F33	91030 92030 93030
	11.28	6 x 1/2	Coarse Medium Fine	C35 M35 F35	94030 95030 96030
	12.10	6 x 5/8	Coarse Medium Fine	C37 M37 F37	91013 92013 93013
	12.10	6 x 3/4	Coarse Medium Fine	C39 M39 F39	94013 95013 96013
	12.94	6 x 1	Coarse Medium Fine	C41 M41 F41	91032 92032 93032
	Oil-Filled Aluminum Oxide Square Files	6.76	4 x 1/4	Coarse Medium Fine	C2 M2 F2
6.76		4 x 5/16	Coarse Medium Fine	C4 M4 F4	91728 91828 91928
6.76		4 x 3/8	Coarse Medium Fine	C6 M6 F6	92128 92228 92328
6.76		4 x 1/2	Coarse Medium Fine	C8 M8 F8	92428 92528 92628
11.28		6 x 3/8	Coarse Medium Fine	C34 M34 F34	97030 98030 99030
11.28		6 x 1/2	Coarse Medium Fine	C36 M36 F36	91130 91230 91330
12.10		6 x 5/8	Coarse Medium Fine	C38 M38 F38	97013 98013 99013
12.10		6 x 3/4	Coarse Medium Fine	C40 M40 F40	91113 91213 91313
12.94		6 x 1	Coarse Medium Fine	C42 M42 F42	94032 95032 96032
Semi-Hard Arkansas Square Files		15.24 16.36 21.22	3 X 1/4 3 X 3/8 3 X 1/2	Semi-Hard Semi-Hard Semi-Hard	SHF13M SHF33M SHF43M
Ultra-Hard Arkansas Square Files	19.12 20.52 26.58	3 X 1/4 3 X 3/8 3 X 1/2	Ultra-Hard Ultra-Hard Ultra-Hard	HF13T HF33T HF43T	71101 71102 71103

SHARPENING STONES (CONTINUED)

TOOL ROOM FILES (CONTINUED)

Product Description	List Price \$	Size (inches)	Grit/Density	Product Number	UPC # 691019-
 Silicon Carbide Triangular Files	9.00	4 x 1/4	Coarse Medium Fine	C9 M9 F9	91029 92029 93029
	9.00	4 x 5/16	Coarse Medium Fine	C11 M11 F11	94029 95029 96029
	9.88	4 x 3/8	Coarse Medium Fine	C13 M13 F13	91031 92031 93031
	9.88	4 x 1/2	Coarse Medium Fine	C15 M15 F15	94031 95031 96031
	12.94	6 x 3/8	Coarse Medium Fine	C43 M43 F43	97032 98032 99032
	12.94	6 x 1/2	Coarse Medium Fine	C45 M45 F45	91132 91232 91332
	13.50	6 x 5/8	Coarse Medium Fine	C47 M47 F47	91034 92034 93034
	13.74	6 x 3/4	Coarse Medium Fine	C49 M49 F49	91014 92014 93014
	14.98	6 x 1	Coarse Medium Fine	C51 M51 F51	91033 92033 93033
 Oil-Filled Aluminum Oxide Triangular Files	9.00	4 x 1/4	Coarse Medium Fine	C10 M10 F10	97029 98029 99029
	9.00	4 x 5/16	Coarse Medium Fine	C12 M12 F12	91129 91229 91329
	9.88	4 x 3/8	Coarse Medium Fine	C14 M14 F14	97031 98031 99031
	9.88	4 x 1/2	Coarse Medium Fine	C16 M16 F16	91131 91231 91331
	12.94	6 x 3/8	Coarse Medium Fine	C44 M44 F44	91432 91532 91632
	12.94	6 x 1/2	Coarse Medium Fine	C46 M46 F46	91732 91832 91932
	13.50	6 x 5/8	Coarse Medium Fine	C48 M48 F48	94034 95034 96034
	13.74	6 x 3/4	Coarse Medium Fine	C50 M50 F50	94014 95014 96014
	14.98	6 x 1	Coarse Medium Fine	C52 M52 F52	94033 95033 96033
Semi-Hard Arkansas Triangles	15.24 16.36 21.22	3 X 1/4 3 X 3/8 3 X 1/2	Semi-Hard Semi-Hard Semi-Hard	SHF113M SHF133M SHF143M	72104 72105 72106
Ultra-Hard Arkansas Triangles	19.12 20.52 26.58	3 X 1/4 3 X 3/8 3 X 1/2	Ultra-Hard Ultra-Hard Ultra-Hard	HF113T HF133T HF143T	72101 72102 72103
Oil-Filled Aluminum Oxide Tapered Triangles	14.56	4 x 1/2-1/4	Coarse Medium Fine	339A 338A 337A	91025 92025 93025

Product Description	List Price \$	Size (inches)	Grit/Density	Product Number	UPC # 691019-
 Silicon Carbide Round Files	11.28	4 x 1/4	Coarse Medium Fine	C25 M25 F25	91430 91530 91630
	11.28	4 x 5/16	Coarse Medium Fine	C27 M27 F27	91730 91830 91930
	12.10	4 x 3/8	Coarse Medium Fine	C29 M29 F29	91413 91513 91613
	12.10	4 x 1/2	Coarse Medium Fine	C31 M31 F31	91713 91813 91913
	14.98	6 x 3/8	Coarse Medium Fine	C63 M63 F63	91433 91533 91633
	14.98	6 x 1/2	Coarse Medium Fine	C65 M65 F65	91733 91833 91933
	16.00	6 x 5/8	Coarse Medium Fine	C67 M67 F67	91026 92026 93026
	16.00	6 x 3/4	Coarse Medium Fine	C69 M69 F69	94026 95026 96026
	16.60	6 x 1	Coarse Medium Fine	C71 M71 F71	93004 94004 95004
 Oil-Filled Aluminum Oxide Round Files	11.28	4 x 1/4	Coarse Medium Fine	C26 M26 F26	92130 92230 92330
	11.28	4 x 5/16	Coarse Medium Fine	C28 M28 F28	92430 92530 92630
	12.10	4 x 3/8	Coarse Medium Fine	C30 M30 F30	92113 92213 92313
	12.10	4 x 1/2	Coarse Medium Fine	C32 M32 F32	92413 92513 92613
	14.98	6 x 3/8	Coarse Medium Fine	C64 M64 F64	92133 92233 92333
	14.98	6 x 1/2	Coarse Medium Fine	C66 M66 F66	92433 92533 92633
	16.00	6 x 5/8	Coarse Medium Fine	C68 M68 F68	97026 98026 99026
	16.00	6 x 3/4	Coarse Medium Fine	C70 M70 F70	91226 91326
	16.60	6 x 1	Coarse Medium Fine	C72 M72 F72	96004 97004 98004
Semi-Hard Arkansas Round Files	18.54 19.12 25.78	3 X 1/4 3 X 3/8 3 X 1/2	Semi-Hard Semi-Hard Semi-Hard	SHF813M SHF803M SHF883M	71107 73101 71108
Ultra-Hard Arkansas Round File	29.56	3 X 1/4	Ultra-Hard	HF813T	71115
Oil-Filled Aluminum Oxide Tapered Rounds	14.56	4 x 1/2-1/4	Coarse Medium Fine	336A 335A 334A	94025 95025 96025

	Point files have both sharp points for use by engravers and die sinkers and round surfaces for resharpening contoured faces.	Oil-Filled Aluminum Oxide Points	16.00	3 X 5/16 Base	Coarse Medium Fine	99A 98A 97A	91426 91526 91626
	Diamond files are widely used on machine parts for cleaning and polishing non-right angles. They are thicker, easier to handle and offer different angles than do bevel files.	Oil-Filled Aluminum Oxide Diamond Files	16.60	4 X 9/16 X 3/16	Coarse Medium Fine	342A 341A 340A	99004 91104 91204
	Knife blades are primarily used to resharpen both the edges and the points of cutting tools. The long, thin edge also makes a knife blade the preferred choice for deburring the edges of tightly spaced groove fittings.	Oil-Filled Aluminum Oxide Knife Blades	12.70	4 X 1 X 1/8 Back	Coarse Medium Fine	31AC 31AM 31AF	91016 92016 93016

SHARPENING STONES (CONTINUED)

SPECIALTY FILES AND STONES



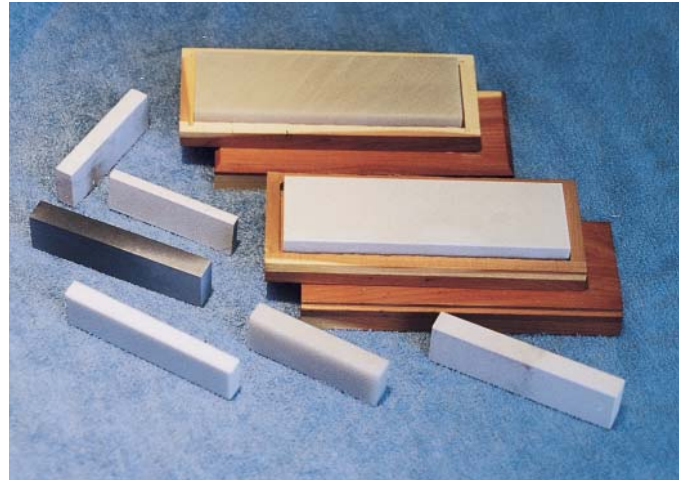
ARKANSAS FILES

Flat files offer the user two good sized polishing surfaces in as small, thin and hard a stone medium that there is available as a standard size. **Bevel files** have the same polishing surfaces as flat files, but also have both acute and obtuse angles at the edges. They are widely used to repolish the edges and angles of machine parts. **Diamond files** are widely used on machine parts for cleaning and polishing non-right angles. They are thicker, easier to handle and offer different angles than do bevel files. The unusual shape of an **oval file** enables an artisan to polish the elliptical recesses and curved edges of exacting instruments. **Point files** have both sharp points for use by engravers and die sinkers and round surfaces for resharpening contoured faces. **Knife blades** are primarily used to resharpen both the edges and the points of cutting tools. The long, thin edge also makes a knife blade the preferred choice for deburring the edges of tightly spaced groove fittings.

Product Description	List Price \$	Size (inches)	Grit/Density	Product Number	UPC # 691019-
Semi-Hard Arkansas Flat	21.78	3 x 3/8 x 1/8	Semi-Hard	SHF823M	71109
Ultra-Hard Arkansas Flat	30.30	3 x 3/8 x 1/8	Ultra-Hard	HF823T	71116
Semi-Hard Arkansas Bevel	15.76	3 x 3/8 x 1/8	Semi-Hard	SHF833M	71110
Ultra-Hard Arkansas Bevel	19.74	3 x 3/8 x 1/8	Ultra-Hard	HF833T	71117
Semi-Hard Arkansas Diamond File	28.48	3 x 1/2 x 3/16	Semi-Hard	SHF843M	71111
Ultra-Hard Arkansas Diamond File	35.68	3 x 1/2 x 3/16	Ultra-Hard	HF843T	71118
Semi-Hard Arkansas Oval	24.24	3 x 1/2 x 3/16	Semi-Hard	SHF853M	71112
Ultra-Hard Arkansas Oval	30.30	3 x 1/2 x 3/16	Ultra-Hard	HF853T	72116
Semi-Hard Arkansas Point	28.48	3 X 1/4 Base	Semi-Hard	SHF863M	72111
Ultra-Hard Arkansas Point	35.68	3 X 1/4 Base	Ultra-Hard	HF863T	72118
Semi-Hard Arkansas Knife	25.14	3 x 3/4 x 1/8 Back	Semi-Hard	SHF873M	71113
Ultra-Hard Arkansas Knife	31.48	3 x 3/4 x 1/8 Back	Ultra-Hard	HF873T	71119

Although **reamer stones** are used primarily to restore sharp edges on reamers, they are also used frequently on taps and dies.

Product Description	List Price \$	Size (inches)	Grit	Product Number	UPC # 691019-
Oil-Filled Aluminum Oxide Reamer Stones	9.46	3 1/2 x 3/4 x 3/16	Medium Fine	MT123M FT123M	91015 92015
	10.26	4 1/2 x 1 x 5/16	Medium Fine	294AM 294AF	91027 92027
	11.28	5 x 1 x 3/16	Medium Fine	MT125M FT125M	92730 92830
	14.56	6 x 1 x 1/4	Medium Fine	MT126M FT126M	97025 98025



Penknife pieces are very long lasting general purpose edge restorers. They are typically used to polish presharpened edges to a razor sharp finish. Very soft Arkansas stones will complete the job the fastest and ultra-hard Arkansas stones will yield the longest lasting edge. **Jewelers stones** are used for the precision sharpening of fine cutting tools. Jewelers, engravers and artisans use these stones when penknife pieces are too short.

Product Description	List Price \$	Size (inches)	Density	Product Number	UPC # 691019-
Very Soft Arkansas Penknife Pieces	11.28	3 x 1 x 3/8	Very Soft	SB13B	71131
	12.52	4 x 1 x 3/8		SB14B	71132
Semi-Hard Arkansas Penknife Pieces	19.84	3 x 1 x 3/8	Semi-Hard	SHB13M	71133
	23.74	4 x 1 x 3/8		SHB14M	71134
Ultra-Hard Arkansas Penknife Pieces	33.10	3 x 1 x 3/8	Ultra-Hard	HB13T	71135
	39.70	4 x 1 x 3/8		HB14T	71136
Semi-Hard Arkansas Jewelers	58.30	4 x 2 x 3/8	Semi-Hard	SHB24M	71127
	84.24	6 x 2 x 3/8		SHB26M	71128
Ultra-Hard Arkansas Jewelers	91.08	4 x 2 x 3/8	Ultra-Hard	HB24T	71129
	131.62	6 x 2 x 3/8		HB26T	71130

Jointer stones are typically fitted into fixtures. They are the preferred tool for restoring and maintaining the cutting edges of the mechanical jointing devices on automatic planers.

Product Description	List Price \$	Size (inches)	Grit	Product Number	UPC # 691019-
Silicon Carbide Jointer Stones	6.76	4 x 3/4 x 1/4	Medium	389	92728
	6.76	4 x 3/4 x 5/16	Medium	392	92828
	9.00	4 x 3/4 x 3/8	Medium	390	92729
	9.00	4 x 3/4 x 1/2	Medium	373	92829
	12.94	4 x 3/4 x 3/4	Medium	391	93432
Oil-Filled Aluminum Oxide Jointer Stones	6.76	4 x 3/4 x 1/4	Coarse	425	92928
	6.76	4 x 3/4 x 5/16	Coarse	428	93128
	9.00	4 x 3/4 x 3/8	Coarse	426	92929
	9.00	4 x 3/4 x 1/2	Coarse	438	93129
	12.94	4 x 3/4 x 3/4	Coarse	440	93532



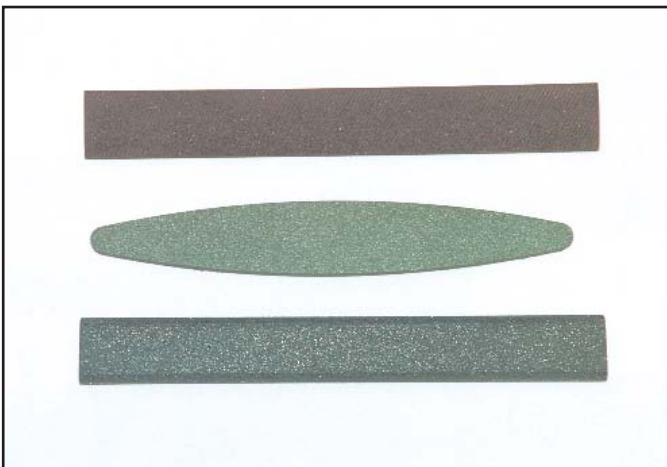
SHARPENING STONES (CONTINUED)

SPECIALTY FILES AND STONES (CONTINUED)



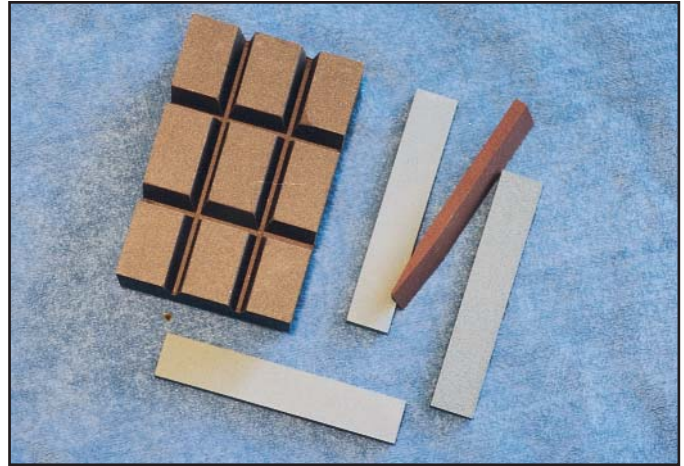
The **machine knife** stone is a fast cutting silicon carbide combination stone with a finger protection groove that enables the craftsman to safely resharpen machine mounted knives. It is also frequently used by metal workers to clean and flatten their tables. The **gouge sharpening stone** is the favorite sharpening and lapping tool of gouge users and other cutting tool users who must hone both inside and outside curved surfaces, due to its unusual shape and its composure of long lasting oil-filled aluminum oxide. The silicon carbide **utility file** will outlast and outsharpen virtually any metal file. Its tapered shape and long reach make it a favorite for sharpening coarse edges on cutting tools. It is also frequently used to resharpen tire stripping spikes.

Product Description	List Price \$	Size (inches)	Grit	Product Number	UPC # 691019-
Machine Knife Stone	29.42	4 Diam x 1 1/2 Thick	Coarse and Fine	289	91024
Gouge Sharpening Stone	24.60	6 x 2 x 1 x 1/2 - 7/16	Fine	15	91017
Silicon Carbide Utility File	22.38	14 overall	Coarse	57	93003



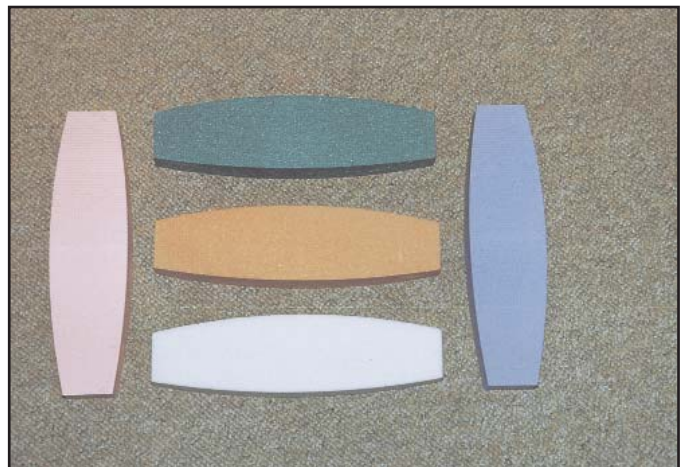
The aluminum oxide **scythestone** will produce a long lasting edge on sickles, scythes and brush hooks. It is typically used between jobs so that upon the next use of the edge resharpening will not be required as quickly. The silicon carbide **sickle and scythestone** is used to quickly restore the edges of sickles, scythes and brush-hooks. It is often used while on the job. The **garden tool sharpener** is made from very fast cutting green silicon carbide abrasive and is relatively new to the industrial marketplace. Consumers have for years found the elliptical shape comfortable for stoning both flat and curved cutting edges.

Product Description	List Price \$	Size (inches)	Grit	Product Number	UPC # 691019-
Aluminum Oxide Scythestone	7.00	10 x 1 5/16 x 9/16-3/16	Coarse	188	91021
Garden Tool Sharpener	10.26	9 1/2 x 1 3/8 x 1/2	Medium	198	93027
Sickle and Scythestone	8.40	10 x 1 1/4 x 3/4	Coarse	192	91022



Aluminum oxide **griddle bricks** have a long history of quickly cleaning restaurant griddles without requiring frequent replacement and without leaving contamination. The design of the **skiving knife stone** has inspired many uses, but this oil-filled aluminum oxide stone is still used mostly by mechanics and machinists for deburring and sharpening Amazeen skiving knives. **Carbide tool slips** are typically used while on the job to maintain the edges of carbide tools. Made from fast cutting green silicon carbide they help to minimize tool regrinding costs.

Product Description	List Price \$	Size (inches)	Grit	Product Number	UPC # 691019-
Griddle Brick	30.48	4 1/2 x 3 x 2	Medium	217	91023
Skiving Knife Stone	12.10	4 x 1 x 1/4	Fine	296F	92713
Green Silicon Carbide Slips For Carbide Tools	6.24	4 1/4 x 3/4 x 3/8	Coarse	39	91018
		4 1/4 x 3/4 x 3/8	Medium	38	92018
		4 1/4 x 3/4 x 3/8	Fine	37	93018
	16.60	Set of 3 slips 1 of each grit	Assorted	33	95000

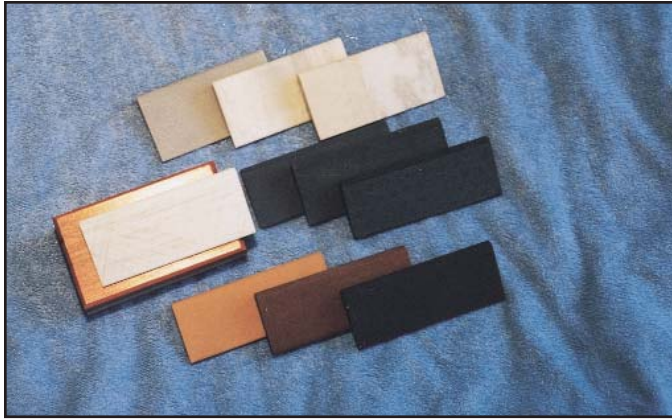


The unique shape of **boat rubs** allows them to fit easily into machinists' hands. They are very popular for the initial removal of large die seams and for breaking down sharp edges on machined parts. They are available in many grades. The five most popular grades are shown in this catalog.

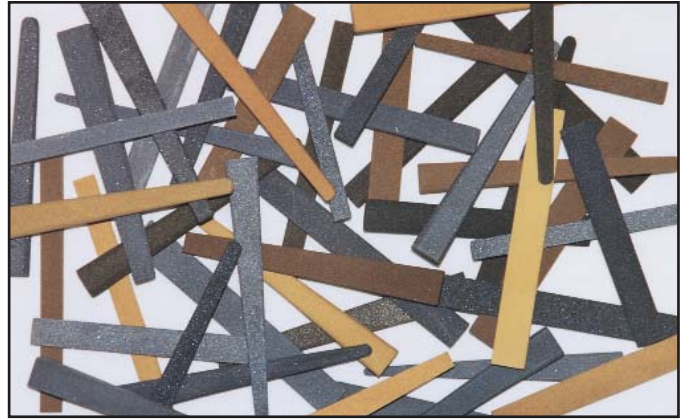
Product Description	List Price \$	Size (inches)	Grade	Product Number	UPC # 691019-
Molded Boat Rub	24.98	1 1/2 x 2 3/8 x 9	WA60I	BRWE60I	81043
Molded Boat Rub	24.98	1 1/2 x 2 3/8 x 9	WA120I	BRWR120I	82043
Molded Boat Rub	30.00	1 1/2 x 2 3/8 x 9	GC80I	BRGC80I	81046
Molded Boat Rub	28.88	1 1/2 x 2 3/8 x 9	C60H	BRCC60H	81045
Molded Boat Rub	28.88	1 1/2 x 2 3/8 x 9	C36H	BRCC36H	82045

SHARPENING STONES (CONTINUED)

SLIP STONES AND SILVERSMITHS' STONES



Round edge slip stones have no sharp edges and are very comfortable to a user's hand. They are used mostly by wood carvers for gouge sharpening. They are also used for resharpening curved knives and tools, molder's knives and bead planers.

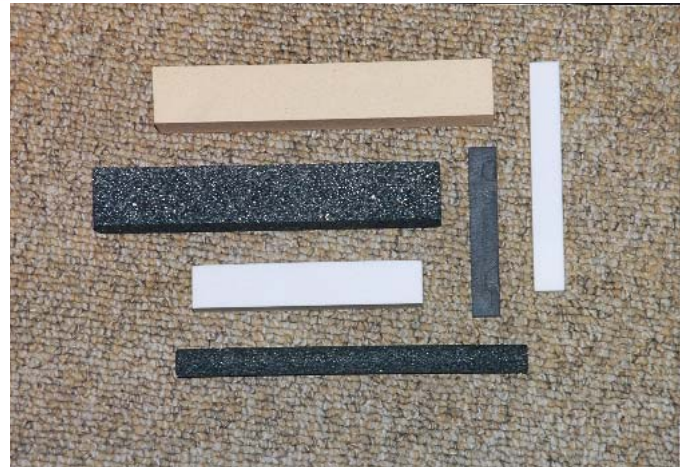


The unique shapes of **silversmiths' stones** are designed for metal workers to use when touching up special instruments, cleaning tools and dies and for honing to close tolerances.

Product Description	List Price \$	Size (inches)	Grit/Density	Product Number	UPC # 691019-
Silicon Carbide Round Edge Slip Stones	24.42	6 x 2 1/4 x 3/4-3/8	Coarse	176C	91012
			Medium	175C	92012
			Fine	174C	93012
	12.10	4 1/2 x 1 3/4 x 1/4-1/16	Coarse	179C	92813
			Medium	178C	92913
			Fine	177C	93113
	16.60	4 1/2 x 2 1/8 x 5/8-5/16	Coarse	182C	91304
Medium			181C	91404	
		Fine	180C	91504	
12.10	4 1/2 x 1 3/4 x 1/2-3/16	Coarse	185C	93213	
		Medium	184C	93313	
		Fine	183C	93413	
9.46	4 x 1 x 7/16-3/16	Coarse	189C	93015	
		Medium	187C	94015	
		Fine	186C	95015	
12.10	5 x 1 x 5/16-3/32	Coarse	293CC	93513	
		Medium	293CM	93613	
		Fine	293CF	93713	
12.10	4 1/2 x 1 3/4 x 3/8-1/8	Coarse	446CC	93813	
		Medium	446CM	93913	
		Fine	446CF	94113	
Oil-Filled Aluminum Oxide Round Edge Slip Stones	24.42	6 x 2 1/4 x 3/4-3/8	Coarse	176A	94012
			Medium	175A	95012
			Fine	174A	96012
	12.10	4 1/2 x 1 3/4 x 1/4-1/16	Coarse	179A	94213
			Medium	178A	94313
			Fine	177A	94413
	16.60	4 1/2 x 2 1/8 x 5/8-5/16	Coarse	182A	91604
Medium			181A	91704	
		Fine	180A	91804	
12.10	4 1/2 x 1 3/4 x 1/2-3/16	Coarse	185A	94513	
		Medium	184A	94613	
		Fine	183A	94713	
9.46	4 x 1 x 7/16-3/16	Coarse	189A	96015	
		Medium	187A	97015	
		Fine	186A	98015	
12.10	5 x 1 x 5/16-3/32	Coarse	293AC	94813	
		Medium	293AM	94913	
		Fine	293AF	95113	
12.10	4 1/2 x 1 3/4 x 3/8-1/8	Coarse	446AC	95213	
		Medium	446AM	95313	
		Fine	446AF	95413	
Very Soft Arkansas Slip	22.00	4 x 1 3/4 x 3/8-1/8	Very Soft	SS4B	71120
Semi-Hard Arkansas Round Edge Slip Stones	36.04	3 x 1 3/4 x 1/4-1/16	Semi-Hard	SHS3M	71121
	58.60	4 x 1 3/4 x 3/8-1/8	Semi-Hard	SHS4M	71122
	33.36	4 x 1 1/4 x 1/4-1/8	Semi-Hard	SHS14M	71123
	66.28	4 1/2 x 2 x 1/2	Semi-Hard	SHF893M	71114
Ultra-Hard Arkansas Slip Stones	56.22	3 x 1 3/4 x 1/4-1/16	Ultra-Hard	HS3T	71124
	91.66	4 x 1 3/4 x 3/8-1/8	Ultra-Hard	HS4T	71125
	52.14	4 x 1 1/4 x 1/4-1/8	Ultra-Hard	HS14T	71126

Product Description	List Price \$	Size (inches)	Grit	Product Number	UPC # 691019-
Silicon Carbide Silver-Smiths' Stones	14.56	4 x 1/2 x 1/16 Flat	Coarse	302C	99025
			Medium	301C	91125
			Fine	300C	91225
	14.56	4 x 1/2-1/4 x 5/16-1/8 Flat Double Tapered	Coarse	305C	91325
			Medium	304C	91425
			Fine	303C	91525
	14.56	4 x 5/16 x 3/16-1/16 Flat Tapered	Coarse	308C	91625
			Medium	307C	91725
			Fine	306C	91825
	14.56	4 x 1/2-1/4 x 5/16-1/16 Oval Double Tapered	Coarse	311C	91925
Medium			310C	92125	
		Fine	309C	92225	
14.56	4 x 1/2-3/16 x 3/16-1/16 Oval Double Tapered	Coarse	314C	92325	
		Medium	313C	92425	
		Fine	312C	92525	
14.56	4 x 3/8-3/16 x 1/8-1/16 Oval Double Tapered	Coarse	317C	92625	
		Medium	316C	92725	
		Fine	315C	92825	
14.56	4 x 7/16 x 3/16-1/8 Oval, Flat Tapered Sides	Coarse	320C	92925	
		Medium	319C	93125	
		Fine	318C	93225	
14.56	3 1/2 x 7/16 x 3/16 Oval	Coarse	323C	93325	
		Medium	322C	93425	
		Fine	321C	93525	
Oil-Filled Aluminum Oxide Silver-Smiths' Stones	14.56	4 x 1/2 x 1/16 Flat	Coarse	302A	93625
			Medium	301A	93725
			Fine	300A	93825
	14.56	4 x 1/2-1/4 x 5/16-1/8 Flat Double Tapered	Coarse	305A	93925
			Medium	304A	94125
			Fine	303A	94225
	14.56	4 x 5/16 x 3/16-1/16 Flat Tapered	Coarse	308A	94325
			Medium	307A	94425
			Fine	306A	94525
	14.56	4 x 1/2-1/4 x 5/16-1/16 Oval Double Tapered	Coarse	311A	94625
Medium			310A	94725	
		Fine	309A	94825	
14.56	4 x 1/2-3/16 x 3/16-1/16 Oval Double Tapered	Coarse	314A	94925	
		Medium	313A	95125	
		Fine	312A	95225	
14.56	4 x 3/8-3/16 x 1/8-1/16 Oval Double Tapered	Coarse	317A	95325	
		Medium	316A	95425	
		Fine	315A	95525	
14.56	4 x 7/16 x 3/16-1/8 Oval, Flat Tapered Sides	Coarse	320A	95625	
		Medium	319A	95725	
		Fine	318A	95825	
14.56	3 1/2 x 7/16 x 3/16 Oval	Coarse	323A	95925	
		Medium	322A	96125	
		Fine	321A	96225	

HAND RUBS, FLOOR RUBS AND DRESSING STICKS



Product Description	List Price \$	Size (inches)	Grit	Product Number	UPC # 691019-
Silicon Carbide Plain Hand Rubbing Bricks	6.88	4 x 2 x 1/2	C24R	HR200	81047
	7.42	4 x 2 x 1	C24R	HR201	81048
	12.36	4 x 2 x 2	C24R	HR202	81049
	21.28	4 x 3 x 2	C24R	HR203	81050
	10.02	6 x 2 x 1/2	C24R	HR204	81051
	10.92	6 x 2 x 1	C24R	HR211	81052
	16.58	6 x 2 x 2	C24R	HR213	81053
	27.28	6 x 3 x 2	C24R	HR214	81054
	38.86	6 x 3 x 3	C24R	HR215	81055
	12.36	8 x 2 x 1	C24R	HR222	82049
	21.46	8 x 2 x 2	C24R	HR225	81056
	36.68	8 x 3 x 2	C24R	HR226	81057
	44.32	8 x 4 x 2	C24R	HR227	81058
	54.22	8 x 3 x 3	C24R	HR228	81059
	60.20	8 x 4 x 3	C24R	HR229	81060
Silicon Carbide Fluted Hand Rubbing Bricks	12.36	4 x 2 x 2	C24R	HR240	83049
	16.58	6 x 2 x 2	C24R	HR241	82053
	21.46	8 x 2 x 2	C24R	HR242	82056
	58.76	8 x 3 x 3	C24R	HR243	81061
Silicon Carbide Fluted Hand Rubbing Bricks with Handles	35.62	8 x 3 1/2 x 1 1/2	C24R	HR250	81062
	28.12	6 x 3 x 1	C24R	HR252	81063
Silicon Carbide Flat Rub Brick with Handle	35.62	8 x 3 1/2 x 3/4	C24R	HR275	82062
Silicon Carbide Floor Rubs	10.92	2 5/8 x 2 x 2	C10Q	FR521SCC10Q4	82052
		2 5/8 x 2 x 2	C24T	FR521SCC24T	83052
		2 5/8 x 2 x 2	C46R	FR521SCC46R	84052
		2 5/8 x 2 x 2	C80S	FR521SCC80S	85052
		2 5/8 x 2 x 2	C120Q	FR521SCC120Q	86052
	12.36	4 x 2 x 2	C10Q	BBDC10Q4	84049
		4 x 2 x 2	C16S	BBDC16S	85049
		4 x 2 x 2	C46T	BBDC46T	86049
		4 x 2 x 2	C80Q	BBDC80Q	87049
		4 x 2 x 2	C120Q	BBDC120Q	88049
Silicon Carbide Floor Rubs with One Parting Seam	21.46	8 x 2 x 2	C10Q	FR521CC10Q4	83056
		8 x 2 x 2	C16T	FR521CC16T	84056
		8 x 2 x 2	C24R	FR521CC24R	85056
		8 x 2 x 2	C46R	FR521CC46R	86056
		8 x 2 x 2	C80Q	FR521CC80Q	87056
Wood Wedge	.58	4 x 3/4 x 3/4-1/4	—	wedge	91005

Product Description	List Price \$	Size (inches)	Specification	Product Number	UPC # 691019
Boron Carbide Dressing Sticks	78.18	3/16 x 1/2 x 3	Boron Carbide	BC1	91019
	64.80	3/16 x 1/2 x 2	Boron Carbide	BC2	91020
Vitrified Aluminum Oxide Dressing Sticks	5.32	1/2 x 1/2 x 4	WA220-HVW4	A2A2DWE220H	81064
	6.40	1/2 x 1/2 x 6	WA150-IVW4	A2A2FWE150I	81035
	6.40		WA220-HVW4	A2A2FWE220H	82035
	13.44		WA320-HVW4	A2A2FWE320H	81036
	6.72	3/4 x 3/4 x 4	WA60-LVW4	C4C4DWE60L	81037
	6.72		WA80-LVW4	C4C4DWE80L	82037
	7.36		WA150-HVW4	349	81070
	6.72		WA150-IVW4	C4C4DWE150I	83037
	6.72	WA240-HVW4	C4C4DWE240H	84037	
	10.64	3/4 x 3/4 x 8	WA220-HVW4	C4C4HWE220H	81065
	12.00	1 x 1 x 6	WA150-GVW4	AAFWE150G	81038
	12.00		WA150-HVSR	AAFWR150H	82038
	12.00		WA1502-HVW4	AAFWE1502H	83038
	12.00		WA150-IVW4	AAFWE150I	84038
	12.00		WA220-HVW4	AAFWE220H	85038
12.00	WA240-HVW4		AAFWE240H	86038	
19.44	WA320-HVSR		AAFWR320H	81039	
14.84	1 x 1 x 8		WA150-HVW4	AAHWE150H	81040
14.84		WA240-HVW4	AAHWE240H	82040	
33.76		WA3202-HVW4	AAHWE3202H	81041	
36.08	2 x 2 x 8	WA46-HVW4	BBHWE46H	81042	
		WA80-HVW4	BBHWE80H	82042	
Vitrified Silicon Carbide Dressing Sticks	7.16	1/2 x 1/2 x 6	C24-SVAC	A2A2FCC24S	81044
	7.16		C80-MVS	A2A2FCC80M	82044
	7.16		C150-KVS	A2A2FCC150K	83044
	7.16		C150-MVS	A2A2FCC150M	84044
	7.16		C220-KVS	A2A2FCC220K	85044
	14.24		GC320-KVS	A2A2FGC320K	81068
	9.88	3/4 x 3/4 x 6	C20-RVAC	C4C4FCC20R	81071
			C120-MVS	C4C4FCC120M	82071
	9.14	1 x 1 x 6	C16-SVAC	AAFCC16S	83069
	9.14		C20-UVAC	AAFCC20U	82069
	9.14		C24-SVAC	347	81069
	13.44		C46-QVAC	AAFCC46Q	81072
	13.44		C80-MVS	AAFCC80M	82072
	13.44		C80-PVAC	AAFCC80P	83072
	13.44		C150-HVS	AAFCC150H	84072
13.44	C150-MVS		AAFCC150M	85072	
13.44	C180-PVS		AAFCC180P	86072	
35.50	C320-JVS		AAFCC320J	81073	
35.50	C320-KVS	AAFCC320K	82073		
16.78	1 x 1 x 8	C16-UVAC	AAHCC16U	82067	
		C24-SVAC	345	81067	
21.46	2 x 2 x 8	C10-QVS	BBHCC10Q4	88056	
Truing Stick	8.92	6 x 1/2" round	C24	56	81066
Wheel Dresser	53.60	10 overall	—	H6M	91007

FINISHING STONES

- DIEMAKER (DM):** The most popular type of finishing stones, Diemaker stones, are fast cutting and break down at a moderate rate. They are suitable for general purpose stoning on most varieties of steel and do not load when used on harder steels.
Blue to Tan
- EDM (EDM):** These stones have been specially designed to quickly remove the scale left behind in the Electrical Discharge Machining process.
Red to Salmon
- EDM+(EM+):** These EDM stones have been treated with resin to improve their form holding ability after having been shaped. The resin also improves the finish to better than expected for the grit size.
Brown
- GENERAL (GP):** For general purpose mold and die finishing of soft to medium steels, these semi-hard polishing stones are more resistant to load than are Diemaker stones.
White
- OIL-FILLED (OT):** Due to their added lubricity, these very hard stones have been successfully used to stone soft metals. Their hardness makes them good for finishing ribs, slots and other hard-to-reach areas.
Ivory
- RUBY (RU):** These very soft, easily shaped stones will never load. They are the best choice for finishing exceptionally soft metals such as aluminum, stainless steel, copper, brass and kirksite.
Pink
- MOLDMAKER:** These silicon carbide stones break down quickly to avoid loading and are best suited for finishing softer grades of steel. They are harder than RU stones, but softer than GP stones. The silicon carbide grain is well known for leaving a satin finish.
Gray (M)
- MOLDMAKER+:** Although not well suited for finishing softer grades of steel, these stones will still leave a satin finish on medium grades of steel where aluminum oxide stones will not. They are better suited for shaping than Moldmaker stones.
Gray (M+)
- ROUGH OUT (RO):** These medium hardness aluminum oxide stones are used to remove deep scratches and tool marks prior to finishing. Resistant to load, they are color coded to aid in distinguishing their grit sizes.
Color coded

RUBY (RU)

SIZE	60 GRIT		80 GRIT		100 GRIT		150 GRIT		220 GRIT	
	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE
1/8x1/4x6	25100	2.78	24145	2.78	25190	2.78	25235	2.78	25280	2.78
1/8x1/2x6	25105	3.00	25150	3.00	25195	3.00	25240	3.00	25285	3.00
1/8x1x6	25110	5.08	25155	5.08	25200	5.08	25245	5.08	25290	5.08
1/4x1/4x6	25115	3.00	25160	3.00	25205	3.00	25250	3.00	25295	3.00
1/4x1/2x6	25120	3.80	25165	3.80	25210	3.80	25255	3.80	25300	3.80
1/2x1/2x6	25125	5.18	25170	5.18	25215	5.18	25260	5.18	25305	5.18
1/2x1x6	25130	7.16	25175	7.16	25220	7.16	25265	7.16	25310	7.16
1x1x6	25135	11.94	25180	11.94	25225	11.94	25270	11.94	25315	11.94
1x2x8	25140	17.42	25185	17.42	25230	17.42	25275	17.42	25320	17.42

ROUGH OUT (RO)

SIZE	80 GRIT		100 GRIT		120 GRIT		150 GRIT		180 GRIT	
	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE
1/4x1x8	25350	2.46	25370	2.46	25390	2.46	25410	2.46	25430	2.46
1/2x1x8	25355	3.08	25375	3.08	25395	3.08	25415	3.08	25435	3.08
1x1x8	25360	4.38	25380	4.38	25400	4.38	25420	4.38	25440	4.38
1x2x8	25365	6.58	25385	6.58	25405	6.58	25425	6.58	25445	6.58

FINISHING STONES (CONTINUED)

DIEMAHER (DM)

SIZE	100 GRIT		120 GRIT		150 GRIT		180 GRIT		220 GRIT		320 GRIT		400 GRIT	
	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE
1/16x1/4x6	25450	2.00	25510	2.00	25570	2.00	25630	2.00	25690	2.00	25750	2.20	25810	2.20
1/16x1/2x6	25455	2.00	25515	2.00	25575	2.00	25635	2.00	25695	2.00	25755	2.20	25815	2.20
1/8x1/4x6	25460	2.00	25520	2.00	25580	2.00	25640	2.00	25700	2.00	25760	2.20	25820	2.20
1/8x1/2x6	25465	2.38	25525	2.38	25585	2.38	25645	2.38	25705	2.38	25765	2.64	25825	2.64
1/8x1x6	25470	2.78	25530	2.78	25590	2.78	25650	2.78	25710	2.78	25770	3.08	25830	3.08
5/32x5/32x4	25475	2.00	25535	2.00	25595	2.00	25655	2.00	25715	2.00	25775	2.20	25835	2.20
1/4x1/4x6	25480	2.38	25540	2.38	25600	2.38	25660	2.38	25720	2.38	25780	2.64	25840	2.64
1/4x1/2x6	25485	2.78	25545	2.78	25605	2.78	25665	2.78	25725	2.78	25785	3.08	25845	3.08
1/4x1x6	25490	4.46	25550	4.46	25610	4.46	25670	4.46	25730	4.46	25790	5.28	25850	5.28
1/2x1/2x6	25495	4.46	25555	4.46	25615	4.46	25675	4.46	25735	4.46	25795	5.28	25855	5.28
1/2x1x6	25500	5.68	25560	5.68	25620	5.68	25680	5.68	25740	5.68	25800	7.20	25860	7.20
1x1x6	25505	8.90	25565	8.90	25625	8.90	25685	8.90	25745	8.90	25805	11.26	25865	11.26

MOLDMAKER (M)

SIZE	100 GRIT		120 GRIT		150 GRIT		180 GRIT		220 GRIT		320 GRIT		400 GRIT	
	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE
1/16x1/4x6	25930	2.00	25990	2.00	26050	2.00	26110	2.00	26170	2.00	26230	2.20	26290	2.20
1/16x1/2x6	25935	2.00	25995	2.00	26055	2.00	26115	2.00	26175	2.00	26235	2.20	26295	2.20
1/8x1/4x6	25940	2.00	26000	2.00	26060	2.00	26120	2.00	26180	2.00	26240	2.20	26300	2.20
1/8x1/2x6	25945	2.38	26005	2.38	26065	2.38	26125	2.38	26185	2.38	26245	2.64	26305	2.64
1/8x1x6	25950	2.78	26010	2.78	26070	2.78	26130	2.78	26190	2.78	26250	3.08	26310	3.08
5/32x5/32x4	25955	2.00	26015	2.00	26075	2.00	26135	2.00	26195	2.00	26255	2.20	26315	2.20
1/4x1/4x6	25960	2.38	26020	2.38	26080	2.38	26140	2.38	26200	2.38	26260	2.64	26320	2.64
1/4x1/2x6	25965	2.78	26025	2.78	26085	2.78	26145	2.78	26205	2.78	26265	3.08	26325	3.08
1/4x1x6	25970	4.46	26030	4.46	26090	4.46	26150	4.46	26210	4.46	26270	5.28	26330	5.28
1/2x1/2x6	25975	4.46	26035	4.46	26095	4.46	26155	4.46	26215	4.46	26275	5.28	26335	5.28
1/2x1x6	25980	5.68	26040	5.68	26100	5.68	26160	5.68	26220	5.68	26280	7.20	26340	7.20
1x1x6	25985	8.90	26045	8.90	26105	8.90	26165	8.90	26225	8.90	26285	11.26	26345	11.26

MOLDMAKER+ (M+)

SIZE	100 GRIT		120 GRIT		150 GRIT		180 GRIT		220 GRIT		320 GRIT		400 GRIT	
	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE
1/16x1/4x6	26410	2.00	26470	2.00	26530	2.00	26590	2.00	26650	2.00	26710	2.20	26770	2.20
1/16x1/2x6	26415	2.00	26475	2.00	26535	2.00	26595	2.00	26655	2.00	26715	2.20	26775	2.20
1/8x1/4x6	26420	2.00	26480	2.00	26540	2.00	26600	2.00	26660	2.00	26720	2.20	26780	2.20
1/8x1/2x6	26425	2.38	26485	2.38	26545	2.38	26605	2.38	26665	2.38	26725	2.64	26785	2.64
1/8x1x6	26430	2.78	26490	2.78	26550	2.78	26610	2.78	26670	2.78	26730	3.08	26790	3.08
5/32x5/32x4	26435	2.00	26495	2.00	26555	2.00	26615	2.00	26675	2.00	26735	2.20	26795	2.20
1/4x1/4x6	26440	2.38	26500	2.38	26560	2.38	26620	2.38	26680	2.38	26740	2.64	26800	2.64
1/4x1/2x6	26445	2.78	26505	2.78	26565	2.78	26625	2.78	26685	2.78	26745	3.08	26805	3.08
1/4x1x6	26450	4.46	26510	4.46	26570	4.46	26630	4.46	26690	4.46	26750	5.28	26810	5.28
1/2x1/2x6	26455	4.46	26515	4.46	26575	4.46	26635	4.46	26695	4.46	26755	5.28	26815	5.28
1/2x1x6	26460	5.68	26520	5.68	26580	5.68	26640	5.68	26700	5.68	26760	7.20	26820	7.20
1x1x6	26465	8.90	26525	8.90	26585	8.90	26645	8.90	26705	8.90	26765	11.26	26825	11.26

GENERAL (GP)

SIZE	100 GRIT		120 GRIT		150 GRIT		180 GRIT		220 GRIT		320 GRIT		400 GRIT	
	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE
1/16x1/4x6	26890	2.00	26950	2.00	27010	2.00	27070	2.00	27130	2.00	27190	2.20	27250	2.20
1/16x1/2x6	26895	2.00	26955	2.00	27015	2.00	27075	2.00	27135	2.00	27195	2.20	27255	2.20
1/8x1/4x6	26900	2.00	26960	2.00	27020	2.00	27080	2.00	27140	2.00	27200	2.20	27260	2.20
1/8x1/2x6	26905	2.38	26965	2.38	27025	2.38	27085	2.38	27145	2.38	27205	2.64	27265	2.64
1/8x1x6	26910	2.78	26970	2.78	27030	2.78	27090	2.78	27150	2.78	27210	3.08	27270	3.08
5/32x5/32x4	26915	2.00	26975	2.00	27035	2.00	27095	2.00	27155	2.00	27215	2.20	27275	2.20
1/4x1/4x6	26920	2.38	26980	2.38	27040	2.38	27100	2.38	27160	2.38	27220	2.64	27280	2.64
1/4x1/2x6	26925	2.78	26985	2.78	27045	2.78	27105	2.78	27165	2.78	27225	3.08	27285	3.08
1/4x1x6	26930	4.46	26990	4.46	27050	4.46	27110	4.46	27170	4.46	27230	5.28	27290	5.28
1/2x1/2x6	26935	4.46	26995	4.46	27055	4.46	27115	4.46	27175	4.46	27235	5.28	27295	5.28
1/2x1x6	26940	5.68	27000	5.68	27060	5.68	27120	5.68	27180	5.68	27240	7.20	27300	7.20
1x1x6	26945	8.90	27005	8.90	27065	8.90	27125	8.90	27185	8.90	27245	11.26	27305	11.26

FINISHING STONES (CONTINUED)

EDM (EM)

SIZE	100 GRIT		120 GRIT		150 GRIT		180 GRIT		220 GRIT		320 GRIT		400 GRIT	
	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE
1/16x1/4x6	27370	2.00	27430	2.00	27490	2.00	27550	2.00	27610	2.00	27670	2.20	27730	2.20
1/16x1/2x6	27375	2.00	27435	2.00	27495	2.00	27555	2.00	27615	2.00	27675	2.20	27735	2.20
1/8x1/4x6	27380	2.00	27440	2.00	27500	2.00	27560	2.00	27620	2.00	27680	2.20	27740	2.20
1/8x1/2x6	27385	2.38	27445	2.38	27505	2.38	27565	2.38	27625	2.38	27685	2.64	27745	2.64
1/8x1x6	27390	2.78	27450	2.78	27510	2.78	27570	2.78	27630	2.78	27690	3.08	27750	3.08
5/32x5/32x4	27395	2.00	27455	2.00	27515	2.00	27575	2.00	27635	2.00	27695	2.20	27755	2.20
1/4x1/4x6	27400	2.38	27460	2.38	27520	2.38	27580	2.38	27640	2.38	27700	2.64	27760	2.64
1/4x1/2x6	27405	2.78	27465	2.78	27525	2.78	27585	2.78	27645	2.78	27705	3.08	27765	3.08
1/4x1x6	27410	4.46	27470	4.46	27530	4.46	27590	4.46	27650	4.46	27710	5.28	27770	5.28
1/2x1/2x6	27415	4.46	27475	4.46	27535	4.46	27595	4.46	27655	4.46	27715	5.28	27775	5.28
1/2x1x6	27420	5.68	27480	5.68	27540	5.68	27600	5.68	27660	5.68	27720	7.20	27780	7.20
1x1x6	27425	8.90	27485	8.90	27545	8.90	27605	8.90	27665	8.90	27725	11.26	27785	11.26

EDM+ (EM+)

SIZE	100 GRIT		120 GRIT		150 GRIT		180 GRIT		220 GRIT		320 GRIT		400 GRIT	
	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE
1/16x1/4x6	27850	2.20	27910	2.20	27970	2.20	28030	2.20	28090	2.20	28150	2.42	28210	2.42
1/16x1/2x6	27855	2.20	27915	2.20	27975	2.20	28035	2.20	28095	2.20	28155	2.42	28215	2.42
1/8x1/4x6	27860	2.20	27920	2.20	27980	2.20	28040	2.20	28100	2.20	28160	2.42	28220	2.42
1/8x1/2x6	27865	2.64	27925	2.64	27985	2.64	28045	2.64	28105	2.64	28165	2.90	28225	2.90
1/8x1x6	27870	3.08	27930	3.08	27990	3.08	28050	3.08	28110	3.08	28170	3.40	28230	3.40
5/32x5/32x4	27875	2.20	27935	2.20	27995	2.20	28055	2.20	28115	2.20	28175	2.42	28235	2.42
1/4x1/4x6	27880	2.64	27940	2.64	28000	2.64	28060	2.64	28120	2.64	28180	2.90	28240	2.90
1/4x1/2x6	27885	3.08	27945	3.08	28005	3.08	28065	3.08	28125	3.08	28185	3.40	28245	3.40
1/4x1x6	27890	4.88	27950	4.88	28010	4.88	28070	4.88	28130	4.88	28190	5.82	28250	5.82
1/2x1/2x6	27895	4.88	27955	4.88	28015	4.88	28075	4.88	28135	4.88	28195	5.82	28255	5.82
1/2x1x6	27900	6.26	27960	6.26	28020	6.26	28080	6.26	28140	6.26	28200	7.92	28260	7.92
1x1x6	27905	9.82	27965	9.82	28025	9.82	28085	9.82	28145	9.82	28205	12.38	28265	12.38

OIL-FILLED (OT)

SIZE	100 GRIT		120 GRIT		150 GRIT		180 GRIT		220 GRIT		320 GRIT		400 GRIT	
	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE	UPC#	PRICE
1/16x1/4x6	28810	2.20	28870	2.20	28930	2.20	28990	2.20	29050	2.20	29110	2.42	29170	2.42
1/16x1/2x6	28815	2.20	28875	2.20	28935	2.20	28995	2.20	29055	2.20	29115	2.42	29175	2.42
1/8x1/4x6	28820	2.20	28880	2.20	28940	2.20	29000	2.20	29060	2.20	29120	2.42	29180	2.42
1/8x1/2x6	28825	2.64	28885	2.64	28945	2.64	29005	2.64	29065	2.64	29125	2.90	29185	2.90
1/8x1x6	28830	3.08	28890	3.08	28950	3.08	29010	3.08	29070	3.08	29130	3.40	29190	3.40
5/32x5/32x4	28835	2.20	28895	2.20	28955	2.20	29015	2.20	29075	2.20	29135	2.42	29195	2.42
1/4x1/4x6	28840	2.64	28900	2.64	28960	2.64	29020	2.64	29080	2.64	29140	2.90	29200	2.90
1/4x1/2x6	28845	3.08	28905	3.08	28965	3.08	29025	3.08	29085	3.08	29145	3.40	29205	3.40
1/4x1x6	28850	4.88	28910	4.88	28970	4.88	29030	4.88	29090	4.88	29150	5.82	29210	5.82
1/2x1/2x6	28855	4.88	28915	4.88	28975	4.88	29035	4.88	29095	4.88	29155	5.82	29215	5.82
1/2x1x6	28860	6.26	28920	6.26	28980	6.26	29040	6.26	29100	6.26	29160	7.92	29220	7.92
1x1x6	28865	9.82	28925	9.82	28985	9.82	29045	9.82	29105	9.82	29165	12.38	29225	12.38

PRODUCT CROSSOVER INFORMATION

OUR PRODUCT NUMBER MATCHED WITH THE UPC NUMBER AND WITH THE LIST PRICE.

PRODUCT NUMBER	UPC# 691019-()	LIST PRICE	PRODUCT NUMBER	UPC# 691019-()	LIST PRICE	PRODUCT NUMBER	UPC# 691019-()	LIST PRICE	PRODUCT NUMBER	UPC# 691019-()	LIST PRICE	PRODUCT NUMBER	UPC# 691019-()	LIST PRICE
15	91017	25.00	300C	91225	14.56	A2A2FWE150I	81035	6.40	C45	91132	12.94	F63	91633	14.98
31AC	91016	12.70	301A	93725	14.56	A2A2FWE220H	82035	6.40	C46	91732	12.94	F64	92333	14.98
31AF	93016	12.70	301C	91125	14.56	A2A2FWE320H	81036	13.44	C47	91034	13.50	F65	91933	14.98
31AM	92016	12.70	302A	93625	14.56	AAFCC16S	83069	9.14	C48	94034	13.50	F66	92633	14.98
33	95000	17.00	302C	99025	14.56	AAFCC20U	82069	9.14	C49	91014	13.74	F67	93026	16.00
37	93018	6.24	303A	94225	14.56	AAFCC46Q	81072	13.44	C50	94014	13.74	F68	99026	16.00
38	92018	6.24	303C	91525	14.56	AAFCC80M	82072	13.44	C51	91033	14.98	F69	96026	16.00
39	91018	6.24	304A	94125	14.56	AAFCC80P	83072	13.44	C52	94033	14.98	F70	91326	16.00
56	81066	8.92	304C	91425	14.56	AAFCC150H	84072	13.44	C53	92132	12.94	F71	95004	16.60
57	93003	22.38	305A	93925	14.56	AAFCC150M	85072	13.44	C54	92732	12.94	F72	98004	16.60
97A	91626	16.00	305C	91325	14.56	AAFCC180P	86072	13.44	C55	92432	12.94	F735M	94009	20.04
98A	91526	16.00	306A	94525	14.56	AAFCC320J	81073	35.50	C56	93132	12.94	FJB35M	92009	20.04
99A	91426	16.00	306C	91825	14.56	AAFCC320K	82073	35.50	C57	97034	13.50	FR521CC10Q4	83056	21.46
107A	93001	26.64	307A	94425	14.56	AAFWE150G	81038	12.00	C58	91134	13.50	FR521CC16T	84056	21.46
107C	91001	26.64	307C	91725	14.56	AAFWE1502H	83038	12.00	C59	97014	13.74	FR521CC24R	85056	21.46
108C	91002	31.56	308A	94325	14.56	AAFWE150I	84038	12.00	C60	91114	13.74	FR521CC46R	86056	21.46
109C	92001	26.64	308C	91625	14.56	AAFWE220H	85038	12.00	C61	97033	14.98	FR521CC80Q	87056	21.46
111A	92003	22.38	309A	94825	14.56	AAFWE240H	86038	12.00	C62	91133	14.98	FR521SCC10Q4	82052	10.92
111C	91003	22.38	309C	92225	14.56	AAFWR150H	82038	12.00	C63	91433	14.98	FR521SCC24T	83052	10.92
112A	92004	16.60	310A	94725	14.56	AAFWR320H	81039	19.84	C64	92133	14.98	FR521SCC46R	84052	10.92
112C	91004	16.60	310C	92125	14.56	AAHCC16U	82067	16.78	C65	91733	14.98	FR521SCC80S	85052	10.92
115	93006	30.94	311A	94625	14.56	AAHWE150H	81040	14.84	C66	92433	14.98	FR521SCC120Q	86052	10.92
116	92006	30.94	311C	91925	14.56	AAHWE240H	82040	14.84	C67	91026	16.00	FT123M	92015	9.46
117	91006	30.94	312A	95225	14.56	AAHWE3202H	81041	33.76	C68	97026	16.00	FT125M	92830	11.28
121	93008	25.02	312C	92525	14.56	BBDC10Q4	84049	12.36	C69	94026	16.00	FT126M	98025	14.56
121A	96008	25.02	313A	95125	14.56	BBDC120Q	88049	12.36	C70	91126	16.00	H6M	91007	53.60
122	92008	25.02	313C	92425	14.56	BBDC16S	85049	12.36	C71	93004	16.60	HB4T	71143	139.72
122A	95008	25.02	314A	94925	14.56	BBDC46T	86049	12.36	C72	96004	16.60	HB6T	71144	206.50
123	91008	25.02	314C	92325	14.56	BBDC80Q	87049	12.36	F1	93028	6.76	HB8T	71145	265.42
123A	94008	25.02	315A	95525	14.56	BBHC10Q4	88056	21.46	F2	91628	6.76	HB13T	71135	33.20
130	96006	30.94	315C	92825	14.56	BBHWE46H	81042	36.08	F3	96028	6.76	HB14T	71136	39.70
131	95006	30.94	316A	95425	14.56	BBHWE80H	82042	36.08	F4	91928	6.76	HB24T	71129	91.08
132	94006	30.94	316C	92725	14.56	BC1	91019	78.18	F5	99028	6.76	HB26T	71130	131.62
145	93010	7.56	317A	95325	14.56	BC2	91020	64.80	F6	92328	6.76	HF13T	71101	19.12
145A	96010	7.56	317C	92625	14.56	BRCC36H	82045	28.88	F7	91328	6.76	HF37T	71102	20.52
146	92010	7.56	318A	95825	14.56	BRCC60H	81045	28.88	F8	92628	6.76	HF43T	71103	26.58
146A	95010	7.56	318C	93225	14.56	BRGC80I	81046	30.00	F9	93029	9.00	HF113T	72101	19.12
147	91010	7.56	319A	95725	14.56	BRWE60I	81043	24.98	F10	99029	9.00	HF133T	72102	21.52
147A	94010	7.56	319C	93125	14.56	BRWR120I	82043	24.98	F11	96029	9.00	HF143T	72103	26.58
174A	96012	24.42	320A	95625	14.56	C1	91028	6.76	F12	91329	9.00	HF813T	71115	29.52
174C	93012	24.42	320C	92925	14.56	C2	91428	6.76	F13	93031	9.88	HF823T	71116	30.30
175A	95012	24.42	321A	96225	14.56	C3	94028	6.76	F14	99031	9.88	HF833T	71117	19.74
175C	92012	24.42	321C	93525	14.56	C4	91728	6.76	F15	96031	9.88	HF843T	71118	35.68
176A	94012	24.42	322A	96125	14.56	C4C4DWE60L	81037	6.72	F16	91331	9.88	HF853T	72116	30.30
176C	91012	24.42	322C	93425	14.56	C4C4DWE80L	82037	6.72	F17	91629	9.00	HF863T	72118	35.68
177A	94413	12.10	323A	95925	14.56	C4C4DWE150I	83037	6.72	F18	92329	9.00	HF873T	71119	31.48
177C	93113	12.10	323C	93325	14.56	C4C4DWE240H	84037	6.72	F19	91929	9.00	HM3T	71154	51.30
178A	94313	12.10	334A	96025	14.56	C4C4FCC20R	81071	9.88	F20	92629	9.00	HM4T	71155	142.72
178C	92913	12.10	335A	95025	14.56	C4C4FCC120M	82071	9.88	F21	91631	9.88	HM6T	71156	201.12
179A	94213	12.10	336A	94025	14.56	C4C4HWE220H	81065	10.64	F22	92331	9.88	HM8T	71157	259.98
179C	92813	12.10	337A	93025	14.56	C5	97028	6.76	F23	91931	9.88	HR200	81047	6.88
180A	91804	16.60	338A	92025	14.56	C6	92128	6.76	F24	92631	9.88	HR201	81048	7.42
180C	91504	16.60	339A	91025	14.56	C7	91128	6.76	F25	91630	11.28	HR202	81049	12.36
181A	91704	16.60	340A	91204	16.60	C8	92428	6.76	F26	92330	11.28	HR203	81050	21.28
181C	91404	16.60	341A	91104	16.60	C9	91029	9.00	F27	91930	11.28	HR204	81051	10.02
182A	91604	16.60	342A	99004	16.60	C10	97029	9.00	F28	92630	11.28	HR211	81052	10.92
182C	91304	16.60	345	81067	16.78	C11	94029	9.00	F29	91613	12.10	HR213	81053	16.58
183A	94713	12.10	347	81069	9.14	C12	91129	9.00	F30	92313	12.10	HR214	81054	27.28
183C	93413	12.10	349	81070	7.36	C13	91031	9.88	F31	91913	12.10	HR215	81055	38.86
184A	94613	12.10	373	92829	9.00	C14	97031	9.88	F32	92613	12.10	HR222	82049	12.36
184C	93313	12.10	389	92728	6.76	C15	94031	9.88	F33	93030	11.28	HR225	81056	21.46
185A	94513	12.10	390	92729	9.00	C16	91131	9.88	F34	99030	11.28	HR226	81057	36.68
185C	93213	12.10	391	93432	12.94	C17	91429	9.00	F35	96030	11.28	HR227	81058	44.32
186A	98015	9.46	392	92828	6.76	C18	92129	9.00	F36	91330	11.28	HR228	81059	54.22
186C	95015	9.46	425	93928	6.76	C19	91729	9.00	F37	93013	12.10	HR229	81060	60.20
187A	97015	9.46	426	92929	9.00	C20	92429	9.00	F38	99013	12.10	HR240	83049	12.36
187C	94015	9.46	428	93128	6.76	C21	91431	9.88	F39	96013	12.10	HR241	82053	16.58
188	91021	7.00	431	92002	31.56	C22	92131	9.88	F40	91313	12.10	HR242	82056	21.46
189A	96015	9.46	433	94001	26.64	C23	91731	9.88	F41	93032	12.94	HR243	81061	54.76
189C	93015	9.46	438	93129	9.50	C24	92431	9.88	F42	96032	12.94	HR250	81062	35.62
192	91022	8.40	440	93532	12.84	C25	91430	11.28	F43	99032	12.94	HR252	81063	28.12
198	93027	10.26	445AC	97016	12.70	C26	92130	11.28	F44	91632	12.94	HR275	82062	35.62
217	91023	30.48	445AF	99016	12.70	C27	91730	11.28	F45	91332	12.94	HS3T	71124	56.22
289	91024	29.42	445AM	98016	12.70	C28	92430	11.28	F46	91932	12.94	HS4T	71125	91.66
292AC	94011	10.86	445CC	94016	12.70	C29	91413	12.10	F47	93034	13.50	HS14T	71126	52.14
292AF	96011	10.86	445CF	96016	12.70	C30	92113	12.10	F48	96034	13.50	M1	92028	6.76
292AM	95011	10.86	445CM	95016	12.70	C31	91713	12.10	F49	93014	13.74	M2	91528	6.76
292C	91011	10.86	446AC	95213	12.10	C32	92413	12.10	F50	96014	13.74	M3	95028	6.76
292F	93011	10.86	446AF	95413	12.10	C33	91030	11.28	F51	93033	14.98	M4	91828	6.76
292M	92011	10.86	446AM	95313	12.10	C34	97030	11.28	F52	96033	14.98	M5	98028	6.76
293AC	94813	12.10	446CC	93813	12.10	C35	94030	11.28	F53	92332	12.94	M6	92228	6.76
293AF	95113	12.10	446CF	94113	12.10	C36	91130	11.28	F54	92932	12.94	M7	91228	6.76
293AM	94913	12.10	446CM											

UPC NUMBER MATCHED TO PRODUCT NUMBER

UPC# 691019-()	PRODUCT NUMBER	UPC# 691019-()	PRODUCT NUMBER	UPC# 691019-()	PRODUCT NUMBER	UPC# 691019-()	PRODUCT NUMBER	UPC# 691019-()	PRODUCT NUMBER	UPC# 691019-()	PRODUCT NUMBER
71100	SHM10	81060	HR229	91032	C41	91931	F23	93001	107A	95008	122A
71101	HF13T	81061	HR243	91033	C51	91932	F46	93003	57	95010	146A
71102	HF33T	81062	HR250	91034	C47	91933	F65	93004	C71	95011	292AM
71103	HF43T	81063	HR252	91104	341A	92001	109C	93006	115	95012	175A
71104	SHF13M	81064	A2A2DWE220H	91113	C40	92002	431	93008	121	95013	M39
71105	SHF33M	81065	C4C4HWE220H	91114	C60	92003	111A	93009	MB35M	95014	M50
71106	SHF43M	81066	56	91125	301C	92004	112A	93010	145	95015	186C
71107	SHF813M	81067	345	91126	C70	92006	116	93011	292F	95016	445CM
71108	SHF883M	81068	A2A2FGC320K	91128	C7	92008	122	93012	174C	95025	335A
71109	SHF823M	81069	347	91129	C12	92009	FJB35M	93013	F37	95026	M69
71110	SHF833M	81070	349	91130	C36	92010	146	93014	F49	95028	M3
71111	SHF843M	81071	C4C4FCC20R	91131	C16	92011	292M	93015	189C	95029	M11
71112	SHF853M	81072	AAFCC46Q	91132	C45	92012	175C	93016	31AF	95030	M35
71113	SHF873M	81073	AAFCC320J	91133	C62	92013	M37	93018	37	95031	M15
71114	SHF893M	82035	A2A2FWE220H	91134	C58	92014	M49	93025	337A	95032	M42
71115	HF813T	82037	C4C4DWE80L	91204	340A	92015	FT123M	93026	F67	95033	M52
71116	HF823T	82038	AAFWR150H	91213	M40	92016	31AM	93027	198	95034	M48
71117	HF833T	82040	AAHWE240H	91214	M60	92018	38	93028	F1	95113	293AF
71118	HF843T	82042	BBHWE80H	91225	300C	92025	338A	93029	F9	95125	313A
71119	HF873T	82043	BRWR120I	91226	M70	92026	M67	93030	F33	95213	446AC
71120	SS4B	82044	A2A2FCC80M	91228	M7	92027	294AF	93031	F13	95225	312A
71121	SHS3M	82045	BRCC36H	91229	M12	92028	M1	93032	F41	95313	446AM
71122	SHS4M	82049	HR222	91230	M36	92029	M9	93033	F51	95325	317A
71123	SHS14M	82052	FR521SCC10Q4	91231	M16	92030	M33	93034	F47	95413	446AF
71124	HS3T	82053	HR241	91232	M45	92031	M13	93113	177C	95425	316A
71125	HS4T	82056	HR242	91233	M62	92032	M41	93125	319C	95525	315A
71126	HS14T	82062	HR275	91234	M58	92033	M51	93128	428	95625	320A
71127	SHB24M	82067	AAHCC16U	91304	182C	92034	M47	93129	438	95725	319A
71128	SHB26M	82069	AAFCC20U	91313	F40	92113	C30	93132	C56	95825	318A
71129	HB24T	82071	C4C4FCC120M	91314	F60	92125	310C	93213	185C	95925	323A
71130	HB26T	82072	AAFCC80M	91325	305C	92128	C6	93225	318C	96004	C72
71131	SB13B	82073	AAFCC320K	91326	F70	92129	C18	93232	M56	96006	130
71132	SB14B	83037	C4C4DWE150I	91328	F7	92130	C26	93313	184C	96008	121A
71133	SHB13M	83038	AAFWE1502H	91329	F12	92131	C22	93325	323C	96010	145A
71134	SHB14M	83044	A2A2FCC150K	91330	F36	92132	C53	93332	F56	96011	292AF
71135	HB13T	83049	HR240	91331	F16	92133	C64	93413	183C	96012	174A
71136	HB14T	83052	FR521SCC24T	91332	F45	92213	M30	93425	322C	96013	F39
71137	SB4B	83056	FR521CC10Q4	91333	F62	92225	309C	93432	391	96014	F50
71138	SB6B	83069	AAFCC16S	91334	F58	92228	M6	93513	293CC	96015	189A
71139	SB8B	83072	AAFCC80P	91404	181C	92229	M18	93525	321C	96016	445CF
71140	SHB4M	84037	C4C4DWE240H	91413	C29	92230	M26	93532	440	96025	334A
71141	SHB6M	84038	AAFWE150I	91425	304C	92231	M22	93613	293CM	96026	F69
71142	SHB8M	84044	A2A2FCC150M	91426	99A	92232	M53	93625	302A	96028	F3
71143	HB4T	84049	BBDC10Q4	91428	C2	92233	M64	93713	293CF	96029	F11
71144	HB6T	84052	FR521SCC46R	91429	C17	92313	F30	93725	301A	96030	F35
71145	HB8T	84056	FR521CC16T	91430	C25	92325	314C	93813	446CC	96031	F15
71146	SM3B	84072	AAFCC150H	91431	C21	92328	F6	93825	300A	96032	F42
71147	SM4B	85038	AAFWE220H	91432	C44	92329	F18	93913	446CM	96033	F52
71148	SM6B	85044	A2A2FCC220K	91433	C63	92330	F26	93925	305A	96034	F48
71149	SM8B	85049	BBDC16S	91504	180C	92331	F22	93928	425	96125	322A
71150	SHM3	85052	FR521SCC80S	91513	M29	92332	F53	94001	433	96225	321A
71151	SHM4	85056	FR521CC24R	91525	303C	92333	F64	94004	M71	97004	M72
71152	SHM6	85072	AAFCC150H	91526	98A	92413	C32	94006	132	97013	C38
71153	SHM8	86038	AAFWE240H	91528	M2	92425	313C	94008	123A	97014	C59
71154	HM3T	86049	BBDC46T	91529	M17	92428	C8	94009	FB35M	97015	187A
71155	HM4T	86052	FR521SCC120Q	91530	M25	92429	C20	94010	147A	97016	445AC
71156	HM6T	86056	FR521CC46R	91531	M21	92430	C28	94011	292AC	97025	MT126M
71157	HM8T	86072	AAFCC180P	91532	M44	92431	C24	94012	176A	97026	C68
72101	HF113T	87049	BBDC80Q	91533	M63	92432	C55	94013	C39	97028	C5
72102	HF133T	87056	FR521CC80Q	91604	182A	92433	C66	94014	C50	97029	C10
72103	HF143T	88049	BBDC120Q4	91613	F29	92513	M32	94015	187C	97030	C34
72104	SHF113M	88056	BBHCC10Q4	91625	308C	92525	312C	94016	445CC	97031	C14
72105	SHF133M	91001	107C	91626	97A	92528	M8	94025	336A	97032	C43
72106	SHF143M	91002	108C	91628	F2	92529	M20	94026	C69	97033	C61
72111	SHF863M	91003	111C	91629	F17	92530	M28	94028	C39	97034	C57
72116	HF853T	91004	112C	91630	F25	92531	M24	94029	C11	98004	F72
72118	HF863T	91006	117	91631	F21	92532	M55	94030	C35	98013	M38
73101	SHF803M	91007	H6M	91632	F44	92533	M66	94031	C15	98014	M59
81035	A2A2FWE150I	91008	123	91633	F63	92613	F32	94032	C42	98015	186A
81036	A2A2FWE320H	91009	MJB35M	91704	181A	92625	317C	94033	C52	98016	445AM
81037	C4C4DWE60L	91010	147	91713	C31	92628	F8	94034	C48	98025	FT126M
81038	AAFWE150G	91011	292C	91725	307C	92629	F20	94113	446CF	98026	M68
81039	AAFWR320H	91012	176C	91728	C4	92630	F28	94125	304A	98028	M5
81040	AAHWE150H	91013	C37	91729	C19	92631	F24	94213	179A	98029	M10
81041	AAHWE3202H	91014	C49	91730	C27	92632	F55	94225	303A	98030	M34
81042	BBHWE46H	91015	MT123M	91731	C23	92633	F66	94313	178A	98031	M14
81043	BRWE60I	91016	31AC	91732	C46	92713	296F	94325	308A	98032	M43
81044	A2A2FCC24S	91017	15	91733	C65	92725	316C	94413	177A	98033	M61
81045	BRCC60H	91018	39	91804	180A	92728	389	94425	307A	98034	M57
81046	BRGC80I	91019	BC1	91813	M31	92729	390	94513	185A	99004	342A
81047	HR200	91020	BC2	91825	306C	92730	MT125M	94525	306A	99013	F38
81048	HR201	91021	188	91828	M4	92732	C54	94613	184A	99014	F59
81049	HR202	91022	192	91829	M19	92813	179C	94625	311A	99016	445AF
81050	HR203	91023	217	91830	M27	92825	315C	94713	183A	99025	302C
81051	HR204	91024	289	91831	M23	92828	392	94725	310A	99026	F68
81052	HR211	91025	339A	91832	M46	92829	373	94813	293AC	99028	F5
81053	HR213	91026	C67	91833	M65	92830	FT125M	94825	309A	99029	F10
81054	HR214	91027	294AM	91913	F31	92832	M54	94913	293AM	99030	F34
81055	HR215	91028	C1	91925	311C	92913	178C	94925	314A	99031	F14
81056	HR225	91029	C9	91928	F4	92925	320C	95000	33	99032	F43
81057	HR226	91030	C33	91929	F19	92929	426	95004	F71	99033	F61
81058	HR227	91031	C13	91930	F27	92932	F54	95006	131	99034	F57
81059	HR228										

ADDITIONAL INFORMATION

Modern Abrasive now offers vitrified bond internal wheels.

Type 1 up to 3 inches in diameter.

Type 5 (recessed 1 side) up to 3 inches in diameter.

In Development: Resin bonded cup wheels

Straight Sided (Type 6)

Flared (Type 11)

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NOTES



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