



NICO TOOL CO.

A.C.N. 004 982 496

MELBOURNE – AUSTRALIA

DIAMOND POLISHING COMPOUNDS

FOR JOBS WHERE QUALITY IS IMPORTANT

NICO-BRAND diamond polishing compounds are manufactured with the highest quality virgin diamonds to strict International standard specifications.



CONCENTRATION AVAILABLE: **Light** (suitable for Lapidary purposes)
Medium (general purpose)
Heavy (high stock removal)

Water or Oil Soluble. Availability of listed micron sizes: (Ex stock)

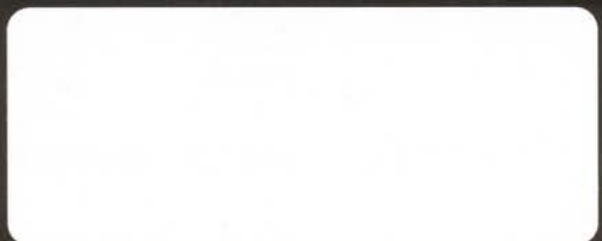
Light Concentration – Oil Soluable Only
Medium Concentration – Oil Soluable Only
Heavy Concentration – Oil Soluable Only or Water Soluable

Particle Range: Narrow particle distribution curve exceeds highest standards in shape, uniformity and precision.

PACKAGING: Nico-Brand Compounds are available in **5-gram SYRINGES**.

INTERNATIONAL QUALITY STANDARDS – ISO-9002 / AS-3902. (Implementation in progress).

DISTRIBUTED BY:



MADE IN AUSTRALIA

TERMINOLOGY

- (a) **Micron Sizes** – are those sizes of diamond powder where separation is achieved by means other than sieving. Mainly by stokesian method and usually much smaller than **sieve sizes**.
- (b) **Particle Size** – is equal to the diameter of a circle, having the same area as the profile when viewed under a microscope.

ONE Carat = 0.2 grams

5 Carats = 1.0 gram

2270 Carats = 1.0 pound (lb)

UNDESTANDING MESH SIZES

Sieve Size Number (U.S. Mesh)	Theoretical Sieve Opening (Micron)	FEPA Size No.	Approx. No. of stones per Carat
18	1000	D1001	110
20	841	D851	180
25	707	D771	310
30	595	D601	510
35	500	D501	860
40	420	D426	1,450
45	354	D356	2,450
50	297	D301	4,100
60	250	D251	6,900
70	210	D213	11,600
88	177	D181	19,500
100	149	D151	32,800
120	125	D126	55,200
140	105	D107	93,000
170	88	D91	156,000
200	74	D76	262,000
230	63	D64	441,000
270	53	D54	742,000
325	44	D46	1,250,00
400	37	—	—

UNDESTANDING MICRON SIZES

MICRON = 1/1000 mm

Micron Size	Approx. Number of Particles per One Carat
60	264,000
45	620,000
30	2,046,000
15	16,960,000
9	78,600,000
6	262,000,000
3	2,050,000,000
1	62,000,000,000

IT PAYS TO BUY QUALITY . . . Quality Is Always Cheaper

Warning: To ensure absolutely perfect results, cross-contamination must be avoided at all costs. Always use separate polishing accessories for each micron size!!

For example if only one diamond particle of, say, 40-micron in size, contaminates finer micron sizes of, say, 15, 9 or finer, such contamination will destroy the final result expected.

RECOMMENDED APPLICATIONS:

(a)	<u>Rough Stock Removal</u> Colour Code – Purple	Grade 90	230 mesh
(b)	<u>Rough Stock Removal</u> Colour Code – Purple	Grade 60	270 mesh
(c)	<u>Rough Stock Removal</u> Colour Code – Brown	Grade 45	460 mesh
(d)	<u>Dimension Lapping</u> Colour Code – Red	Grade 30	590 mesh
(e)	<u>Fine Finish</u> Colour Code – Blue	Grade 15	1,150 mesh
(f)	<u>High Finish</u> Colour Code – Green	Grade 9	1,800 mesh
(g)	<u>Mirror Finish</u> Colour Code – Orange	Grade 6	3,000 mesh
(h)	<u>Extra High Polish</u> Colour Code – Yellow	Grade 3	8,000 mesh
(i)	<u>Super High Finish</u> Colour Code – Grey	Grade 1	14,000 mesh
(j)	<u>Ultra Super Finish</u> Colour Code – Grey	Grade 1/2	60,000 mesh
(k)	<u>Highest Possible Finish</u> Colour Code – Grey	Grade 1/4	100,000 mesh
(l)	<u>Highest Possible Finish</u> Colour Code – Grey	Grade 1/8	200,000 mesh
(m)	<u>Highest Possible Finish</u> Colour Code – Grey	Grade 1/10	250,000 mesh

MICRON SELECTOR – FOR LAPPING

Micronised Grade Number	Mesh Size Equivalent	Typical Finish Micro-Inches
36-54	450	15-25
30-40	500	10-15
22-36	600	7-9
20-30	800	5-9
15-25	1,000	4-8
15-20	1,100	4-7
10-20	1,200	4-6
8-15	1,500	3-6

MICRON SELECTOR – FOR POLISHING

Micronised Grade Number	Mesh Size Equivalent	Typical Finish Micro-Inches
6-12	1,800	3-5
4-8	3,000	2-3
2-6	6,000	1-3
1-5	7,500	1-2.5
2-4	8,000	1-2
0-2	14,000	0-2
0-1/2xx	100,000	0-1/2
0-1/4xx	200,000	0-1/4
0-1/5xx	250,000	0-1/5

International Standardisation of Grid Sizes for Diamond and Cubic Boron Nitride

Sieve Grain Designations

Diamond FEPA-Standard		Cubic Boron Nitride FEPA-Standard		US-Standard ASTM-E-11-70 Diamond and Cubic Boron Nitride		Nominal Mesh width n, ISO R 565 1972 µm
FINE	COARSE	FINE	COARSE	FINE	COARSE	
D 1181	D 1182	B 1181	B 1182	16/ 18	16/20	1180/1000
D 1001		B 1001		18/ 20		1000/ 850
D 851	D 852	B 851	B 852	20/ 25	20/30	850/ 710
D 711		B 711		25/ 30		710/ 600
D 601	D 602	B 601	B 602	30/ 35	30/40	600/ 500
D 501		B 501		35/ 40		500/ 425
D 426	D 427	B 426	B 427	40/ 45	40/50	425/ 355
D 356		B 356		45/ 50		355/ 300
D 301		B 301		50/ 60		300/ 250
D 251	D 252	B 251	B 252	60/ 70		250/ 212
D 213		B 213		70/ 80	212/ 180	
D 181		B 181		80/100		180/ 150
D 151		B 151		100/120		150/ 125
D 126		B 126		120/140		125/ 106
D 107		B 107		140/170		106/ 90
D 91		B 91		170/200		90/ 75
D 76		B 76		200/300		75/ 63
D 64		B 64		230/270		63/ 53
D 54		B 54		270/325		53/ 45
D 46		B 46		325/400		45/ 38



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