



# DIAMOND PLATING CO. PTY. LTD.

A.C.N. 004 982 496

14 SHEARSON CRESCENT, MENTONE, VIC. 3194, AUSTRALIA  
TELEPHONE: (03) 9584 5566 FAX: (03) 9583 9339

## SYNTHETIC DIAMOND POWDER

### WHAT IS A CARAT?

A Carat is an ancient measure of weight, used in trading with precious stones and metals.

1 Carat = 0.2 grams  
5 Carats = 1.0 gram  
2270 Carats = 1.0 Pound (lb)

### TERMINOLOGY

- a. **Micron Sizes** – are those sizes of diamond powder where separation is achieved by means other than sieving. Mainly by the 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 of the particle when viewed under a microscope.

#### MICRON = 1/1000 mm

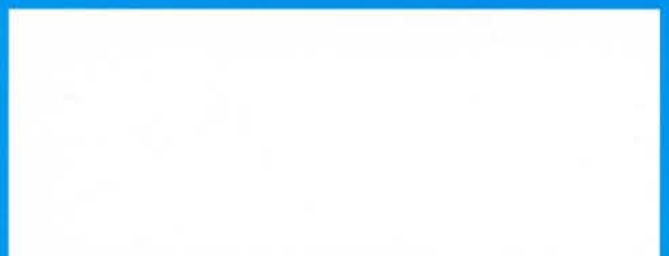
Micron Size	Approx. Number of Particles per Carat
60	264 000
45	620 000
30	2 046 000
15	16 960 000
9	78 600 000
6	262 000 000
3	2 050 000 000
1	62 000 000 000

#### UNDERSTANDING MESH SIZES

Sieve Size Number (U.S. Mesh)	Theoretical Sieve Opening (Micron)	FEPA Size No.	Approx. No. of Stones per Carat
18	1 000	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
80	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	1 250 000
400	37	—	—

**BUY QUALITY DIAMONDS ONLY . . . OR . . . DON'T BUY AT ALL**

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## CHOOSING THE CORRECT MICRON SIZE 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

## 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
0-1XX	60 000	0-1
0-1/2XX	100 000	0-1/2
0-1/4XX	200 000	0-1/4
0-1/5XX	250 000	0-1/5

### WARNING

To ensure absolutely perfect results, cross-contamination of various micron sizes must be avoided at all costs. Therefore, always use separate polishing accessories for each micron size. *For example*, if even one single microscopic particle of, say, 40 micron size contaminates a compound of a smaller micron size compound, such contamination will destroy the final result expected from this smaller micron size.

A **Certificate of Quality** will be furnished upon request with any order exceeding 100 carats, certifying that the product is of virgin quality, micronised in the U.S.A. by the world's leading company and that the close micron range conforms with the U.S. Bureau of Standards, as stated on this list.

\* **Please note** that there may be a cheaper product offered on the market, but it may be of dubious origin or quality.

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