



**SPECIALISTS IN  
PRECISION ABRASIVES**

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## Microgrit SIC / Silicon Carbide Powders and Grains

**MICROGRIT SIC** is made by a precision water classification process using material that is produced from the reaction between high purity silica sand and petroleum coke in a resistance-type furnace. Measuring 9.0+ on the MOHS scale of hardness, silicon carbide is one of the hardest abrasives known in the industry. The inherent friability of the sharp crystalline structure assures the continuous exposure of new cutting edges, which produces a faster and cleaner cutting performance.

**MICROGRIT SIC** powders are precisely graded to the particle size specifications set forth by the European FEPA "F" Microgrit Standard. **MICROGRIT SIC** powders are also available in sizes that are graded to the "JIS" Japanese Industrial Standard. Material is available in both Black and Green color.

### APPLICATIONS

- Bonded and coated abrasive products
- Brake linings
- Wire Sawing
- Kiln furniture
- Advance ceramics
- Refractory applications
- Paints
- Wear resistance floors
- Anti static floors
- Metal matrix composites
- Precision lapping
- Grinding and polishing

**Table 1. Grain size distribution of microgrits F230 to F1200**

Grit Designation	d3 Max. value	d50 value	d94 Min. value
F230	123.3	63.5-71.0	36.2
F240	105.4	54.0-59.0	29.7
F280	89.0	44.5-48.3	23.1
F320	74.1	35.3-39.1	17.1
F360	50.5	27.2-31.0	12.2
F400	48.7	20.9-23.4	7.8
F500	38.2	15.2-17.8	4.6
F600	29.3	10.8-13.3	2.4
F800	21.8	7.3-9.8	1.3
F1000	15.9	5.0-7.0	0.2
F1200	11.4	3.5-4.8	0.2 (for 80%)

These values apply to measurement by means of laser diffraction (Helos), and have been correlated to the values in FEPA standard 42-D-1984 R1993 and ISO 8486.

**Table 2. Grit size distribution of microgrits JIS 240 to JIS 8000**

Grit Designation	d3 Max. value	d50 value	d94 value
JIS 240	103.0	54.0 - 60.0	40.0
JIS 280	87.0	45.0 - 51.0	33.0
JIS 320	74.0	37.5 - 42.5	27.0
JIS 360	66.0	35.5 - 37.0	23.0
JIS 400	58.0	28.0 - 32.0	20.0
JIS 500	50.0	23.0 - 27.0	16.0
JIS 600	43.0	18.5 - 21.5	13.0
JIS 700	37.0	15.7 - 18.3	11.0
JIS 800	31.0	13.0 - 15.0	9.00
JIS 1000	27.0	10.5 - 12.5	7.00
JIS 1200	23.0	8.70 - 10.3	5.50
JIS 1500	20.0	7.40 - 8.60	4.50
JIS 2000	17.0	6.10 - 7.30	4.00
JIS 2500	14.0	5.00 - 6.00	3.00
JIS 3000	11.0	3.50 - 4.50	2.00
JIS 4000	8.00	2.60 - 3.40	1.30
JIS 6000	5.00	1.60 - 2.40	0.80
JIS 8000	3.50	0.90 - 1.50	0.60 @ 75%

Measurement by means of electrical resistance test method with the Coulter Multisizer II

**Table 3. Chemical analysis (typical values in wt %)**

Grit Designation	SiC (green / dark)	C (green / dark)	Si (green / dark)	Fe (green / dark)
F8 - F36	99.5% / 99.0%	0.05% / 0.15%	0.15% / 0.3%	0.005% / 0.005%
F40 - F70	99.6% / 99.0%	0.1% / 0.15%	0.05% / 0.2%	0.005% / 0.005%
F80 - F150	99.5% / 99.5%	0.1% / 0.15%	0.05% / 0.1%	0.005% / 0.005%
F180, F220	99.3% / 99.3%	0.2% / 0.2%	0.05% / 0.1%	0.005% / 0.005%
F230 - F360	99.0% / 98.8%	0.1% / 0.2%	0.1% / 0.15%	0.01% / 0.02%
F400 - F1200	99.0% / 98.7%	0.1% / 0.1%	0.1% / 0.1%	0.01% / 0.03%

The data quoted in this line card are typical for the material. They are intended as a guide and should not be used in preparing specifications. The product may deviate from the figures given and represent our latest findings.