

GC

Green Silicon Carbide

C

Black Silicon Carbide



该照片是示意图。This photograph is an image.

■ GC

GC 是具有高 SiC 纯度的绿色碳化硅研磨材料。六方晶的 α 型晶体除了硬度仅次于金刚石以外，从化学方面来看，在常温下也非常稳定。因此，不会被药品等侵蚀，能够通过破碎自身产生锐利的磨削刃，从而发挥出出色的研磨能力。

GC 不仅可以作为研磨材料广泛用于水晶、铁素体的精抛或切割、Si 晶棒的切割用钢丝锯，以及从其他超硬金属或刀具类的加工，至黄铜和铜合金等软质金属、树脂类的加工，超作为精加工用精密磨石的材料也是最适合的。另外，由于电气方面具有半导体的性质，而且导热性良好，可耐受高温，因而还被用于散热器（散热用部件）的材料。

■ C

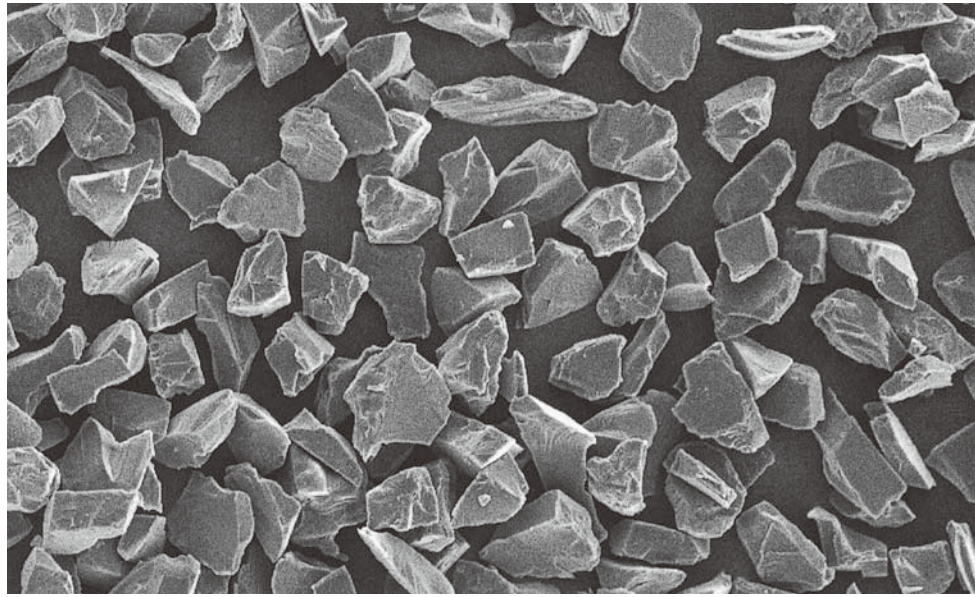
C 是黑色碳化硅研磨材料，也被通称为金刚砂。与 GC 相同，由在电阻炉中以 2000℃ 以上的高温，使硅石与焦炭热反应而得到的 α 型碳化硅晶体构成。与 GC 相比虽然纯度、硬度稍差，但韧性出色。通过本公司独有的制造方法得到的产品具有稳定的刀刃和最适合于磨粒加工的粒度分布，能够实施出色的表面加工。C 除了研磨布纸、超精加工用精密磨石的材料以外，还最适合于铸铁、黄铜、铜、铝、石材、光掩膜用玻璃等的精抛。另外，也适合于半导体晶体等的精密珩磨、切割加工。

■ GC

GC, green silicon carbide, is a very high purity SiC lapping powder. The hexagonal α -type crystal is just below diamond in terms of hardness, and its chemical stability is excellent at room temperature. The result is a product with superior lapping and polishing capabilities, which is not affected by chemicals, and can spontaneously generate sharp grinding edges through fragmentation. GC is well suited for use as a lapping powder in a wide range of functions, including the precision lapping and dicing of crystal and ferrite, the slicing of Si ingot, and the processing of materials ranging from ultra hard metals and edged tools to soft metals such as brass and other copper alloys. But that's not all, GC is used in the processing of various resins as well. GC is also ideal for use in super finishing precision grindstones. As it possesses the electrical properties of a semiconductor, GC has good heat conductivity and has the ability to withstand high temperatures, making it useful as a material in fine ceramics.

■ C

C is a black silicon carbide lapping powder, commonly known as Carborundum. Like GC, this product is obtained by reacting silica and coke in an electric furnace at a temperature of more than 2000°C, resulting in a product with an α -type silicon carbide crystal configuration. Although in comparison with GC, C is slightly lower in purity and hardness, it does have excellent toughness. C is manufactured using this company's own unique production methods. Because of its stable cutting edges and its ideal particle size distribution, it is used for abrasive machining. The unique abrasive character of C makes it possible for superior lapping to be done on a work surface. C is ideal for use as a material of precision lapping polishing clothes and papers, and finishing precision grindstones. In addition, it can also be used for precision lapping of cast iron, brass, copper, aluminum, stones, and glass for photomasks. It is also well suited for the precision honing and dicing process necessary in such products as semiconductor crystals.



GC#1000

标准粒度标准 Standard Specifications for Particle Size

粒度 Particle Size	粒度分布 Particle Distribution (μm)				包装 Packaging	
	最大粒径 Maximum particle size	累积高度3% 点的粒径 Particle size at 3% point	累积高度50% 点的粒径 Particle size at 50% point	累积高度94% 点的粒径 Particle size at 94% point	立式袋 净重(kg) Stand pack Net weight (kg)	纸袋 净重(kg) Vinyl lined Net weight (kg)
# 240	≤ 127	≤ 103	58.6± 3.0	≥40.0	5	20
# 280	≤ 112	≤87.0	49.4± 3.0	≥33.0	5	20
# 320	≤98.0	≤74.0	41.1± 2.5	≥27.0	5	20
# 360	≤86.0	≤66.0	36.1± 2.0	≥23.0	5	20
# 400	≤75.0	≤58.0	30.9± 2.0	≥20.0	5	20
# 500	≤63.0	≤50.0	26.4± 2.0	≥16.0	5	20
# 600	≤53.0	≤43.0	21.1± 1.5	≥13.0	5	20
# 700	≤45.0	≤37.0	17.9± 1.3	≥11.0	5	20
# 800	≤38.0	≤31.0	14.7± 1.0	≥9.00	5	20
# 1000	≤32.0	≤27.0	11.9± 1.0	≥7.00	5	20
# 1200	≤27.0	≤23.0	9.90±0.80	≥5.50	5	20
# 1500	≤23.0	≤20.0	8.40±0.60	≥4.50	5	20
# 2000	≤19.0	≤17.0	6.90±0.60	≥4.00	4	20
# 2500	≤16.0	≤14.0	5.60±0.50	≥3.00	4	20
# 3000	≤13.0	≤11.0	4.00±0.50	≥2.00	4	20
# 4000	≤11.0	≤8.00	3.00±0.40	≥1.30	4	20
# 6000	≤8.00	≤5.00	2.00±0.40	≥0.80	3	20
# 8000	≤6.00	≤3.50	1.20±0.30	≥0.60 ※(1)	3	15
#10000			0.51~0.70		3	10
#20000			0.50 ※(2)		2	
#30000			0.32 ※(2)		2	

粒度测量方法在#8000之前为电阻法、#10000为沉降天平法、20000/#30000为激光衍射散射法。

Particle size is measured by Electrical sensing zone methods up to size #8000, by Sedimentation balance methods for #10000 and by Laser diffraction dispersion methods for #20000, #30000.

注(1):累积75%点的粒径 (dv-75值)

Note(1):Particle size at 75% point(dv-75 value)

注(2):代表值

Note(2):a Representative value

备注:C产品制造至#4000以下, GC产品至#30000以下。

Remark:Product C is produced up to size #4000, Product GC is produced up to size #30000.

质量标准 Quality Standard

种类 Type of product	粒度 Particle size	比重 Specific Gravity	化学成分 Chemical composition (%)		
			SiC	C.F	Fe.s
GC	# 240~# 3000	≥3.18	≥96.0	≤0.50	≤0.30
	# 4000~# 10000	≥3.16	≥92.0	≤2.00	≤0.30
	#20000~#30000	≥3.16	≥90.0	≤2.00	≤0.30
C	# 240~# 4000	≥3.16	≥94.0	≤1.50	≤0.50