One Stop Local Supply Source
Global Products - Local Service
PanAbrasives

HardCut™ Silicon Carbide

Product Description and Technical Data:

HardCut™ Silicon Carbide is an extremely hard, sharp and aggressive abrasive. It is formed inside electric furnaces, at a temperature of 2200°C and produced from quartz and petroleum coke. It is chemically stable, has high resistance to oxidation and is also unaffected by acids and will only react to alkali at very high temperatures. As an abrasive, it is surpassed in hardness only by diamond, cubic boron nitride and boron carbide.

Being so hard HardCut™ is extremely fast cutting and can be used to clean and etch very hard surfaces that would otherwise not be possible with any other softer abrasives. Products manufactured from Tungsten Carbide may also be cleaned with HardCut™.

HardCut™ is harder and sharper than Aluminium Oxide but is more friable, therefore prone to breaking down at a faster rate.

HardCut™ is available in 2 types, HardCut™ Type G and HardCut™ Type B.

Type G is the purest form of commercially available Silicon Carbide. It is used in many applications ranging from blast cleaning and glass etching, manufacture of bonded and coated abrasives through to refractory and ceramic applications. It is most suited for surface finishing non-ferrous materials such as cemented carbides, optical glass and ceramics.

Type B is used for surface finishing applications requiring a fast cutting action without leaving any ferrous residue on the blast surface. It is also extensively used in the manufacture of coated and bonded abrasives (e.g. sand paper, grinding stones and wheels), in refractory products and for glass etching.



Silicon Carbide	ANSI B74.12

HardCut™ Abrasive Properties:

Property	Typical Value	Typical Chemical Composition						
			Type B			Type G		
Shape	Angular	Grade	12 - 90	100 - 180	220 - 240	12 - 90	100 - 180	220 - 240
Hardness (Moh Scale)	9.15							
Bulk Density (kg/m³)	1760	SiC %	> 98.5	98	97	> 99	98.5	97.5
Particle S.G.	3.2	FC %	< 0.2	< 0.3	< 0.3	< 0.2	< 0.25	< 0.25
Colour	Type B - Crystalline Black Type G - Semi Transparent Dark Green	Fe_2O_3 %	< 0.6	< 0.8	< 1.2	< 0.2	< 0.5	< 0.7
Size Standard	ASTM							

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HardCut™ Available Sizes:

Grade	Microns	Inch	Grade	Microns	Inch	Grade	Microns	Inch	Grade	Microns	Inch
4	4750 - 5600	.187 - .220	**14**	1400 - 1700	.055 - .066	**40**	425 - 500	.016 - .019	**100**	125 - 150	.005 - .006
5	4000 - 4750	.157 - .187	**16**	1180 - 1400	.046 - .055	**46**	355 - 425	.013 - .016	**120**	106 - 125	.004 - .005
6	3350 - 4000	.131 - .157	**20**	1000 - 1180	.039 - .046	**54**	300 - 355	.011 - .013	**150**	75 - 106	.003 - .004
7	2800 - 3350	.110 - .131	**22**	850 - 1000	.033 - .039	**60**	250 - 300	.009 - .011	**180**	63 - 90	.0025 - .0035
8	2360 - 2800	.092 - .110	**24**	710 - 850	.027 - .033	**70**	212 - 250	.008 - .009	**220**	53 - 75	.002 - .003
10	2000 - 2360	.078 - .092	**30**	600 - 710	.023 - .027	**80**	180 - 212	.007 - .008	**240**	45 - 53	.001 - .002
12	1700 - 2000	.066 - .078	**36**	500 - 600	.019 - .023	**90**	150 - 180	.006 - .007			

Other sizes available upon request

HardCut™ Packaging:

25kg Bags	1 Tonne Pallet (40 x 25kg Bags)

HardCut™ Ordering Information:

Stock Code	AOT-SCXXX
Key	XXX - Mesh Size (e.g. XXX = 008 for Mesh 8)

