

DUOCEL RVC PHYSICAL CHARACTERISTICS

		Compression factor				Vitreous Carbon (Solid)
		1X	3X	5X	10X	
Density	lbs/ft ³	3	9	15	30	103
	gm/cc	0.048	.14	.24	.48	1.65
Void volume	%	97	91	85	70	0
Hardness	Mohs	6-7	6-7	6-7	6-7	6-7
Compressive Strength	psi	40-170 ^a	^b	^b	^b	100x10 ³
	kg/cm ²	3-12 ^a	^b	^b	^b	7x10 ³
Tensile Strength	psi	25-150 ^a	^b	^b	^b	30x10 ³
	kg/cm ²	3-12 ^a	^b	^b	^b	2.2x10 ³
Modulus of Elasticity (beam)	psi (x10 ³)	4.5-10 ^a	^b	^b	^b	3.4x10 ³
	kg/cm ²	320-730 ^a	^b	^b	^b	250x10 ³
Compressive Modulus	psi (x10 ³)	4.9-9 ^a	^b	^b	^b	^b
	kg/cm ²	360-660 ^a	^b	^b	^b	^b
Shear Modulus	psi (x10 ³)	4.4	^b	^b	^b	^b
	kg/cm ²	320	^b	^b	^b	^b
Specific Heat	BTU/lb/F	0.3	0.3	0.3	0.3	0.3
	cal/gm/C	0.3	0.3	0.3	0.3	0.3
Thermal Conductivity	BTU-in/ft ² -hr-F	.25-.35 ^a	^b	^b	^b	58
	cal/cm-sec-C	.08-1.2x10 ^{-3b}	^b	^b	^b	.01-.02
Coefficient of Thermal Expansion	30-200F	in/in/F (x10 ⁻⁶)	1.2	1.2	1.2	1.2
	0-100C	m/m/C (x10 ⁻⁶)	2.2	2.2	2.2	2.2
	200-1800F	x10 ⁻⁶ /F	1.8	1.8	1.8	1.8
	100-1000C	x10 ⁻⁶ /C	3.2	3.2	3.2	3.2
Maximum Temperature	Non-oxidizing	F	1800	1800	1800	5400
		C	1000	1000	1000	3000
	Oxidizing	F	600	600	600	1112
		C	310	310	310	600
Specific Resistivity	Ohm-in	.18-.27	-	-	-	.001-.002
	Ohm-cm	.47-.69	-	-	-	0.001
Perpendicular to compression	Ohm-in	-	^c .07-.10	^c .035-.04	^c .01-.05	-
	Ohm-cm	-	^c .18-.25	^c .09-.11	^c .02-.13	-
Parallel to compression	Ohm-in	-	^d .31	^d .17	^d .03	-
	Ohm-cm	-	^d .78	^d .44	^d .08	-

^aHigher values for 100 PPI, lower for 10 PPI

^uData not available

^cHigher values for 60 PPI, lower for 100 PPI

^d100 PPI