

# RadarWave®

RadarWave®, an innovative family of prepreg materials used to manufacture advanced radome systems principally for aerospace and defense applications. RadarWave materials provide cost effective technical alternatives to the esoteric and higher cost materials traditionally used to manufacture advanced radome systems.

### Key Features & Benefits

- Enhanced electrical properties approaching quartz reinforcements.
- Available in lightweight fabrics for flexibility in radome design
  - 70 gsm version may also be available upon customer request
- Available using several Park Aerospace electrical grade resin systems (including E-761 epoxy and V-376 Cyanate Ester)

### Product Forms

- Available in up to 60" wide (50" is standard)
- High performance glass
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### Physical Properties

	Epoxy		Cyanate Ester	
	E-761 RW 8HS 300	E-761 RW 8HS 100	V-376 RW 8HS 300	V-376 RW 8HS 100
Resin Content (Dry) %	40	40	40	40
Gel Time	300	354	120	128
Flow mins	14	12	22	15
Cured Ply Thickness,	0.009	0.0034	0.0081	0.0032

# RadarWave®

## Mechanical Properties

Test Property	Test Method	Test Temp	E-761	E-761	V-376	V-376
			RW-300	RW-100	RW-300	RW-100
			Avg	Avg	Avg	Avg
0° Tensile Strength, Ksi	D3039	RT	59	57	60	61
		ETW (180°F)	44	43	48	53
		ETD (300°F)	NA		52	-
0° Tensile Modulus, Msi	D3039	RT	2.6	2.5	3.6	3.4
		ETW (180°F)	2.1	2.1	3.4	3.2
		ETD (300°F)	NA		3.3	-
0° Compressive Strength, Ksi	D695	RT	69	60	74	75
		ETW (180°F)	29	35	54	57
		ETD (300°F)	NA		49	-
0° Compressive Modulus, Msi	D695	RT	3.2	3.0	3.8	3.3
		ETW (180°F)	2.7	2.9	3.6	3.2
		ETD (300°F)	NA		3.6	-
In Plane Shear Strength, Ksi	D3518	RT	15.2	19	-	18
		ETW	7.6	11	-	14
0° Flexural Strength, Ksi	D790	RT	-	-	90	-
		ETW (180°F)	-	-	77	-
		ETD (300°F)	NA		81	-
0° Flexural Modulus, Msi	D790	RT	-	-	3.3	-
		ETW (180°F)	-	-	4.1	-
		ETD (300°F)	NA		2.9	-
0° Short Beam Shear	D2344	RT	-	-	9.5	-
		ETW (180°F)	-	-	7.5	-
		ETD (300°F)	NA		8.0	-

# Aerospace Composite Materials

Test Property	Test Method	Test Temp	E-761	E-761	V-376	V-376
			RW-300	RW-100	RW-300	RW-100
			Avg	Avg	Avg	Avg
Open Hole Compression Strength, Ksi	D6484	RT	-	30	35	32
		ETW (180°F)	44	23	27	27
		ETD (300°F)	NA		24	-
Double Shear Bearing Strength, Ksi	D5961	RT	-	77	-	71
		ETW	-	71	-	60
Onset Glass Transition Temperature, °F	SRM 18R-94	RT	230	237	383	382
		ETW	189	196	319	299

\* RTD = 70 +/- 10F; ETW = 180 +/- 5F after saturation for 5 mins; conditioned at 145°F/85%RH to 0.05% over a span of 7 days

## For Processing Guidelines, Shelf-Life, Out-time and Storage recommendations:

Go here: [E-761 Technical Data Sheet](#)

Go here: [V-376 Technical Data Sheet](#)

For Information about Park's materials  
Please call +1.316.283.6500  
[www.parkaerospace.com](http://www.parkaerospace.com)

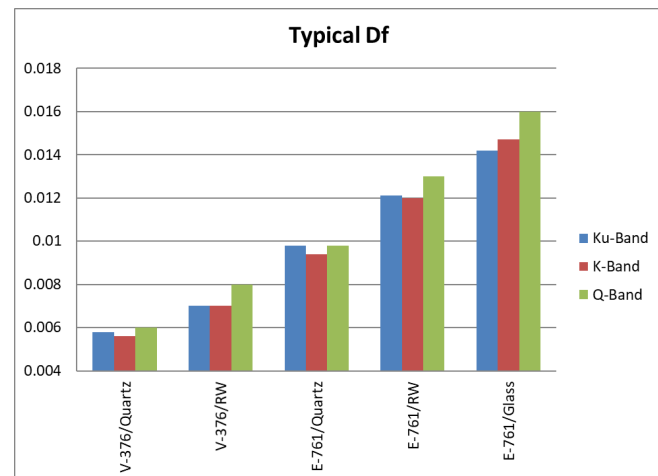
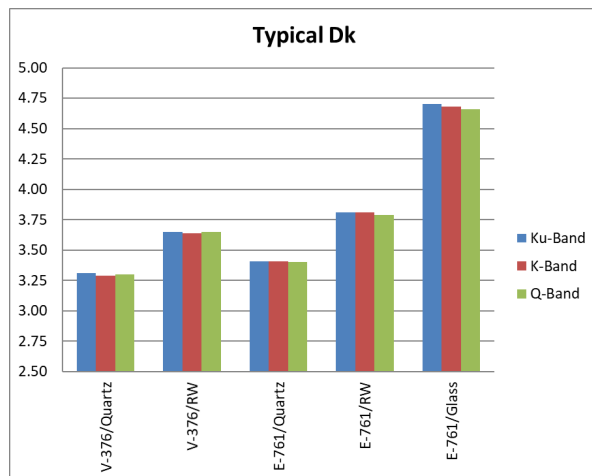


# Aerospace Composite Materials

## RadarWave®

### Electrical Properties

Material	Dk			Df		
	Ku-Band	K-Band	Q-Band	Ku-Band	K-Band	Q-Band
V-376/RW-300	3.65	3.64	3.65	0.007	0.007	0.008
V-376/RW-100	3.67	3.66	3.66	0.0075	0.0075	0.0083
E-761/RW-300 (Predicted)	3.81	3.81	3.79	0.0121	0.0120	0.0130
E-761/RW-100	3.81	3.81	3.79	0.0121	0.0120	0.0130



All test data provided are typical values and not intended to be specification values. For review of critical specification tolerances, please contact a company representative directly.

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