

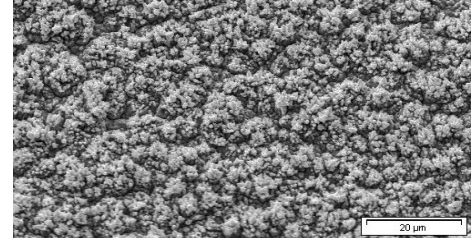
**DOUBLE-SIDED TREATED COPPER FOIL.**

IPC  
Grade 3



**TYPICAL SUBSTRATES**

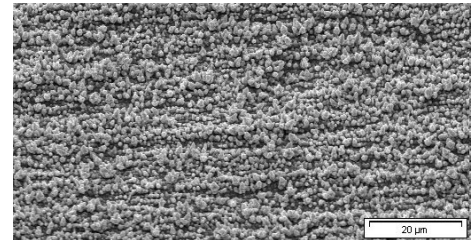
Carbon epoxy like resin systems.



Treated Electrolyte Side

**TYPICAL PROCESSES**

Pre-impregnated mesh/perforated copper with high peel on both sides.



Treated Drum Side

**TYPICAL APPLICATIONS**

Electrical shielding and lightning protection in aerospace and wind power engines.

**TYPICAL AVERAGE PROPERTIES\***

TZA-TZA							
MEASURED PARAMETERS		UNITS	PRODUCT GAUGE			IPC	
Nominal Thickness		µm oz.	18 1/2	35 1	70 2	Specification IPC-4562A	Test Method IPC-TM-650
Area Weight		g/m <sup>2</sup>	159	290	585	3.4.4	2.2.12
Treated Drum Side Roughness (Rz)	JIS	µm	≤ 4.2			-	2.2.17
	ISO		≤ 5.1			3.4.5	
Treated Electrolyte Side Roughness (Rz)	JIS		4.1 - 6.7	5 - 8.4	5.8 - 11	-	
	ISO		5 - 8	6 - 10	7 - 13	3.4.5	
Tensile Strength Transverse (RT)		MPa (k.Lb/in <sup>2</sup> )	≥ 276 (≥ 40)			3.5.1	2.4.18
Elongation Transverse (RT)		%	≥ 6	≥ 9	≥ 12	3.5.3	
Peel Strength FR4 halogen free <sup>1/1</sup> (RT)	Treated DS	N/mm (Lb/in)	≥ 0.75 (≥ 4.3)	≥ 0.8 (≥ 4.6)	≥ 1.05 (≥ 6.0)	3.5.4	2.4.8
	Treated ES		≥ 1.0 (≥ 5.7)	≥ 1.2 (≥ 6.8)	≥ 1.3 (≥ 7.4)		
Copper resistivity (untreated product)		Ω*g/m <sup>2</sup>	≤ 0.166	≤ 0.162		3.8.1.2	2.5.14
Copper purity (untreated product)		%	≥ 99.8			3.8.1.1	2.3.15

<sup>1/1</sup> Laminate construction with thickness ≥ 0.5 mm

\* ALL OF THIS TECHNICAL INFORMATION HAS BEEN DETERMINED WITH DUE CARE AND THOROUGHNESS. HOWEVER, BECAUSE THE CONDITIONS OF USE AND PROCESS AND APPLICATION TECHNOLOGIES EMPLOYED CAN SUBSTANTIALLY VARY, THE PROVIDED DATA AND FIGURES CAN ONLY SERVE AS NON-BINDING GUIDELINES. THEY DO NOT CONSTITUTE A GUARANTEE THAT THE PURCHASED ITEM WILL POSSESS CERTAIN ATTRIBUTES. FOR THIS REASON, NO LIABILITY WHATSOEVER CAN BE ASSUMED FOR THEM. THE BUYER IS OBLIGED TO CHECK THE SUITABILITY OF ALL SUPPLIED PRODUCTS.